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Theology in Aristotle's *Metaphysics*

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I hereby declare that this thesis has not been and will not be submitted in whole or in part to another university for the award of any other degree.

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Summary

Whether Aristotle wrote the treatises of *Metaphysics* with different conceptions of the science of Being in mind has long puzzled scholars. The particular question that causes them unease is whether Aristotle's enterprise in establishing the science of Being through the several treatises of *Metaphysics* is marked by a general science of Being, studying all departments of Being whatsoever (*metaphysica generalis*), or whether his investigation of this science reflects an attitude towards a special metaphysics (*metaphysica specialis*) seeking knowledge of a special department of Being, in this case, God, and therefore should be regarded as a science that is eminently theological. In this thesis, I aim to show that Aristotle's enterprise in *Metaphysics* does not necessarily hinder reconciliation between the universal and the theological dimensions of the science of Being and that although Aristotle's conception of the science of Being is eminently theological it does not conflict with its also being universal. Furthermore, I aim to show that had the conception of the science of Being in Aristotle's mind not been theological, it would not be universal either.

Abbreviations

An. Post.	*Posterior Analytics*
An. Pr.	*Prior Analytics*
Cael.	*De Caelo*
Cat.	*Categories*
De An.	*De Anima*
De Mem.	*De Memoria*
DS	*On Divination in Sleep*
Econ.	*Economics*
EE	*Eudemian Ethics*
EN	*Nicomachean Ethics*
GA	*Generation of Animals*
GC	*De Generatione et Corruptione*
HA	*Historia Animalium*
Int.	*De Interpretatione*
LD	*On Youth, Old Age, Life and Death, and Respiration*
MA	*Movement of Animals*
Met.	*Metaphysics*
Meteor.	*Meteorologica*
MM	*Magna Moralia*
OD	*On Dreams*
OS	*On Sleep*
OU	*On the Universe*
PA	*Parts of Animals*
Phys.	*Physics*
PN	*Parva Naturalia*
Poet.	*Poetics*
Pol.	*Politics*
Prob.	*Problems*
Rhet.	*Rhetoric*
Rh. Alex.	*Rhetoric to Alexander*
Soph. El.	*Sophistici Elenchi*
SS	*Sense and Sensibilia*
Top.	*Topics*
VV	*On Virtues and Vices*

Introduction

'What is the relation between the ontological question asked by the philosopher and the ontological question asked by the theologian?'
Paul Tillich, *Systematic Theology*. I, p. 22.

What can be said with respect to the relation between theological and ontological inquiry into Being? The question inevitably turns out to be a basic inquiry into the relation of the study of God and Being. Can we find such a close relation between the inquiry into God and Being, whereby they may turn out to be the same inquiry, or must we necessarily distinguish them? If we can indeed distinguish them, to what degree is this possible? One of the texts containing possible answers to such questions is Aristotle's *Metaphysics*, which stands at the foundations of almost all speculations with respect to God that we encounter in the history of philosophy.

The conception of the science of Being as it appears in *Metaphysics* reflects the tension between the study of God and the study of Being. The conception of the science of Being Aristotle has in mind may be puzzling in the face of the remaining textual evidence. Indeed, in some of the passages Aristotle seems to describe the science of Being in a purely non-theological manner:

> There is a science [ἐπιστήμη] which investigates [θεωρεῖ] being as being [ὂν ᾗ ὄν] and the attributes which belong to this in virtue of its own nature [καὶ τὰ τούτῳ ὑπάρχοντα καθ᾽ αὑτό]. Now this is not the same as any of the so-called special sciences; for none of these others deals generally with being as being [καθόλου περὶ τοῦ ὄντος ᾗ ὄν]. They cut off [ἀποτεμόμεναι] a part of being and investigate the attributes [τὸ συμβεβηκός] of this part - this is what the mathematical sciences for instance do.[1]

The science of Being, as Aristotle describes it in this passage, must not deal with a specific part of Being; rather, it must deal with Beings without qualification, taken universally. This, as a matter of fact, is what distinguishes the science of Being from the other so-called special sciences that 'cut off' (ἀποτεμόμεναι) a

[1] *Met*. Γ, 1, 1003a20-26. Unless otherwise noted, quotations of Aristotle are taken from *The Revised Oxford Translations of the Completed Works of Aristotle*.

part of Being and execute their inquiry into the limits of that part of Being with which they have to deal. Similar descriptions of the science of Being can be encountered throughout the *Metaphysics*. In Book K, for instance, Aristotle states that 'since the science of the philosopher [ἡ τοῦ φιλοσόφου ἐπιστήμη] treats of being qua being [τοῦ ὄντος ᾗ ὂν] universally [καθόλου], and not of some part [μέρος] of it…',[2] and a little later Aristotle adds 'philosophy does not inquire about particular subjects in so far as each of them has such and such attributes [ᾗ τούτων ἑκάστῳ τι συμβέβηκεν], but considers [σκοπεῖ] each subject in relation to being qua being [περὶ τὸ ὂν δέ, ᾗ ὂν τῶν τοιούτων ἕκαστον]'.[3] In Book E, again he states that 'we are seeking the principles [Αἱ ἀρχαὶ][4] and the causes [τὰ αἴτια] of the things that are [τῶν ὄντων], and obviously of things qua being [ᾗ ὄντα]'.[5] All of these passages more or less emphasise the same characteristic of the science of Being, namely that it should be a universal inquiry into Being without any limitation whatsoever.

In a number of other passages, however, Aristotle describes the science of Being as if it deals with a particular part of Being, that is, with God. In Book K, for instance, Aristotle describes the science of Being thus:

> Evidently, then, there are three kinds of theoretical sciences [τῶν θεωρητικῶν ἐπιστημῶν] - natural science [φυσική], mathematics and theology [θεολογική]. The class of theoretical sciences is the best [βέλτιστον], and of these themselves the last named is best [ἡ τελευταία λεχθεῖσα]; for it deals with the highest of existing things [περὶ τὸ τιμιώτατον γάρ ἐστι τῶν ὄντων][6]

The science of Being in this passage is described as dealing with the highest instance of Being, namely God, for which reason it can rightly be regarded as a 'theological science'. Similarly, in Book E, Aristotle describes the same science thus:

> But if there is something which is eternal [ἀΐδιον] and immovable [ἀκίνητον] and separate [χωριστόν], clearly the knowledge of it belongs to a theoretical

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[2] *Met*. K, 3, 1060b31-32
[3] *Met*. K, 4, 161b25-27.
[4] Throughout this thesis I will use the word 'principle' to render 'ἀρχη'.
[5] *Met*. E, 1, 1025b3-4.
[6] *Met*. K, 7, 1064b1-5.

> science [θεωπητικῆς] – not, however, to natural science [φυσικῆς] (for natural science deals with certain movable things [κινητῶν]) nor to mathematics, but to a science prior [προτέρας] to both. For natural science deals with things which are inseparable from matter [ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ][7] but not immovable [οὐκ ἀκίνητα], and some parts of mathematics deal with things which are immovable [ἀκίνητα], but probably not separate [οὐ χωριστὰ], but embodied in matter; while the first science [πρώτη] deals with things which are both separate [χωριστὰ] and immovable [ἀκίνητα].[8]

The criterion used to differentiate the science of Being from the other so-called special sciences in this passage is not the extent of universality that the special sciences and the science of Being enjoy, as it is in the previously cited passage from Book Γ; rather, it is exactly the scope of their investigation that distinguishes these sciences from each other. Accordingly, rather than dealing with the whole parts of Being, the science of Being must deal with what is separate and immovable. From this passage, one might reasonably conclude that what Aristotle has in mind in terms of the outlook of the science of Being is not so different from the other special sciences, as just like the others the science of Being investigates a part of Being, namely God. Similarly, having enumerated three types of substances, namely the non-eternal sensible substances, the eternal sensible substances and the Immobile Substance, Aristotle, in Book Λ of *Metaphysics*, goes on to say that 'the former two kinds of substance are the subject of natural science [φυσικῆς] (as they imply movement [μετὰ κινήσεως γάρ]); but the third kind belongs to another science'.[9] Accordingly, the science of Being deals with a part of Being, namely the Immobile Substance, rather than Being as a whole.[10]

These passages show that the tension between the investigation of Being and the investigation of God is acutely reflected in Aristotle's *Metaphysics*. The problem is not overlooked by scholars; on the contrary, it occupied many of them in the nineteenth and twentieth centuries. Given the different descriptions of the science of Being in *Metaphysics*, many have tried to discover whether

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[7] The translation would be more accurate if Ross had rendered this phrase as 'but physics deals with things which are separate…'.

[8] *Met*. E, 1, 1026a10-16. I have slightly modified the translation and rendered 'χωριστόν' as 'separate' rather than 'separable' as Ross suggested for reasons that will become clear in the third chapter of this thesis.

[9] *Met*. Λ, 1, 1069a36-b1.

[10] See, *Phys*. I, 9, 192a34 and II, 2, 194b14 for similar descriptions of the science of Being.

Aristotle wrote the treatises of *Metaphysics* with different conceptions of the science of Being. The particular question that vexes them is whether Aristotle's enterprise in establishing the science of Being through the several treatises of *Metaphysics* is marked by a general science of Being, studying all departments of Being whatsoever (*metaphysica generalis*), or whether his investigation of this science reflects an attitude towards a special metaphysics (*metaphysica specialis*) seeking knowledge of a special department of Being, in this case God, and therefore should be regarded as a science that is eminently theological.

Among modern scholars, Natorp was the first to recognise this puzzle, which he finds insoluble:

> That this ambiguous conception of the theme of the πρώτη φιλοσοφία contains an insufferable contradiction (...) it is impossible to have as a result that the πρώτη φιλοσοφία should in fact on the one hand be the universal science, the science that is basic for all, but on the other hand be one and the same as the science of immaterial, unchangeable Being, as of the most excellent class of Being.[11]

According to Natorp, the two conceptions of the science of Being in the treatises of *Metaphysics* are contradictory and the riddle of the science of Being as to whether it is a universal study of Beings or a special science of God is insoluble.

Whereas in the face of this seemingly insoluble contradiction, Natorp chose to omit the theological component from the realm of the science of Being,[12] Jaeger attempted to solve the problem by referring to Aristotle's philosophical development. Jaeger saw an evolution in Aristotle's thoughts. In the first stage of his philosophical development, Aristotle's approach to the science of Being is marked by Platonism and tends towards theological science:

> At first he proceeded strictly in the direction indicated by Plato, that is, he retained the supersensible world as the object of first philosophy, as we learn from the manifesto *On Philosophy*, and merely replaced the transcendental Ideas with the first mover, which, being unmoved, eternal, and transcendent, possessed the properties that being must have according to Plato. This, his

[11] Natorp, P. 'Thema und Disposition der aristotelishen Metaphysic' *Philos. Monastsh.*, XXIV (1888), 37-65; pp. 49-50, trans. J. Owens (1951), p. 19.
[12] See Owens (1951), p. 20.

> earliest, metaphysics was exclusively a science of the being that is moved and transcendent, i.e. theology. It was not the science of being as such.[13]

This 'Platonic' and 'theological' stage, however, develops towards a more 'ontological' stage, especially by the effect of some positive investigations[14] that Aristotle has engaged in. This resulted in a more 'Aristotelian' conception of the science of Being, e.g. the conception of the science of Being that we encounter in Book Γ. This new conception of the science of Being, contrary to that in Book A and Book Λ, is marked by a universal investigation into Being qua Being. In other words, the evolution of Aristotle's thought is a retrogressive theology affecting large chunks of *Metaphysics* and marked by contradictory passages therein.

Jaeger's developmentalist ideas spread rapidly among Aristotelian scholars.[15] Owen was the first to emphasise, perhaps more than the others who followed, the importance of the role of Aristotle's notion of *pros hen*, what he calls 'focal meaning', in Aristotle's philosophical development. Owen has noted that Book Γ goes far beyond Book A and Book Λ in its conception of the universal science of Being.[16] The basic motivation for Aristotle's philosophical development, as Owen observes, is to be found in the notion of *pros hen*. In developing the doctrine of ordered homonymy that can be used as a means to unify the science of Being, Aristotle must have changed the theological view he had of the science of Being, converting it to the universal science of Being.

Leo Elders also saw a development in Aristotle's thoughts, unlike Jaeger, but he thinks that the Platonic era can be linked to the notion of the 'universal science' of Being found in Book Γ, whereas the 'theological science' appears to be more

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[13] Jaeger (1962), p. 219.
[14] According to Jaeger, we owe *Problems* and *History of Animals* to such interests.
[15] For the effect of Jaeger's views on Aristotelian scholarship see Chroust (1996). See also Witt (1996) for a very helpful classification of the developmentalist theories. Encouraged by Jaeger's views many scholars attempted to provide their own developmentalist scenarios of the evolution of Aristotle's philosophy. Some of these scholars have converted Jaeger's proposal (e.g. Wundt and Gohlke; for a general discussion of these latter scholars see Owens (1951), pp. 39-40), attempting to show that Aristotle has moved backwards from a universal science of Being towards a theological science.
[16] Owen (1979), pp. 24-5.

'Aristotelian'. This development, in his view, is not a 'progress backwards' theology, as Jaeger suggested; rather, it is a forward moving theology:

> There is every reason to assume that Aristotle at first tried to establish a general science of being along the lines of Academic thought. This first philosophy dealt with the essence of things, their concatenation and dependence on ultimate principles. It is possible, or perhaps even likely, that in this general science of being, that part of it which was devoted to the study of these first principles was somewhat singled off and was on the way of becoming a theology.[17]

Three years after the publication of Elders's *Commentary*, Walter Leszl claimed in 1975 that the conception of the science of Being that appears in Book Γ, which is to be identified with ontology, should be regarded as a separate science that can in no way be identified as theology. These two sciences, as Leszl notes, 'are sufficiently *sui generis*'.[18] Similar views continued to be expressed by scholars who observed a clear contradiction between the two conceptions of the science of Being in Aristotle. More recently, for instance, Hintikka noted in support of Jaeger that 'the degree of systematicity of Aristotle's thought at any stage of his development is much lower than is usually assumed' and 'It seems to me that Jaeger really should have pushed his point further'.[19]

In contrast to scholars who are all too ready to find contradictions in different conceptions of the science of Being, a more 'unitarian' and 'traditional' view continues to be advocated by many, who aver that it is indeed possible to reconcile what one could call the universal metaphysics of Book Γ and the theological conception of the same science expressed in Book E and Book Λ. One of the pre-eminent advocates of this view is Sir David Ross. He stressed the reconcilability of the two conceptions of the science of Being in his *Aristotle*:

> But the two views are reconcilable; if there is any unchangeable substance, the study of it will be first philosophy and universal just because it is first. In studying the primary kind of being, metaphysics studies being as such. The true nature of being is exhibited not in that which can exist only as an element

[17] Elders (1972), p. 72.
[18] Leszl (1975), p. 32.
[19] Hintikka (1996), p. 83.

> in a concrete whole, nor in that which is infected by potentiality and change, but only in that which is both substantial and unchangeable.[20]

A similar line of thought can be observed in von Arnim as well:

> I do not, in fact, admit that in K (and in Γ and E) any contamination of two contradictory conceptions regarding the object of metaphysics, which must arise out of two different sources of thought, is to be seen.[21]

Arnim hints, however, that the solution to this problem lies in the homonymy of Being:

> It in no way excludes the other and secondary types of Being - insofar as they stand in relation to this primary Being through which they are called Beings - from treatment in this science. Only the first Being, the godhead, joins in itself the Eleatic characteristics of true Being-independent self-subsistence, eternity, and immobility.[22]

Von Arnim observes that things in the Universe are called Beings in reference to the highest instance of Being, namely God. In other words, he sees no contradiction in Aristotle's conception of the science of Being as he places God at the centre of the *pros hen* relation explicated in Book Γ, and manages to combine the two seemingly contradictory treatises of *Metaphysics*.

Quite distinct from these views, Owens suggested that there is no ontological component in the science of Being:

> The 'ontological' conception of the science, accordingly, is nowhere to be found in the *Metaphysics*. A science treating universally of Beings that is not identified with the science of a definite type of Being, the primary type, is foreign to the Stagirite's procedure. The object of such a science would be the concept of 'Being.' Aristotle is well aware of the presence of such a concept. He expressly teaches that it is not Entity. Entity - Being qua Being -, however, is what the Primary Philosophy treats. The concept 'Being', therefore, cannot be its object.[23]

The science of Being cannot accordingly treat the concept 'Being', since this term by itself does not have an ontological status in Aristotle's philosophy. The only thing that can be studied by the science of Being, therefore, is substance, what Owens calls 'entity', and in the case of the science of Being, it must be

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[20] Ross, D. *Aristotle*. (1996, first published in 1923), p. 163.
[21] Arnim, H. 'Zu W. Jaegers Grundlegung der Entwicklungsgeschichte des Aristoteles' *Wien. Stud.*, XLVI (1928), 1-48; p. 20, trans. J. Owens (1951), p. 27.
[22] *Ibid.*, p. 32, trans. J. Owens (1951), p. 27.
[23] Owens (1951), p. 471.

nothing other than the highest substance. Consequently, the science of Being is reduced to theology. Since there is no ontological component in the science of Being, there cannot be contradiction in the overall conception of the science of Being either.

Patzig, perhaps more effectively than the other scholars enumerated so far, attempted to show the unity of ontological and theological conceptions of the science of Being:

> It is clear from these remarks that the embarrassing contradiction between a 'first philosophy' which is universal ontology and a 'first philosophy' which, as theology, investigates only the substance of God simply did not exist for Aristotle. First philosophy is more philosophically reflective than either of these simplifications; it is theology of so special a kind that it is *as such at the same time* ontology. Aristotle is envisaging here a philosophical discipline that is both a first and a general philosophy, and a substance that is so superior to all other substances that it can at the same time be called in a certain sense substance in general.[24]

Through dealing with the highest substance, the science of Being at the same time deals with 'substance in general'. Again, the basis for such a claim lies in Aristotle's establishment of *pros hen*, what Patzig calls 'paronymy'. The science of Being therefore deals with the highest substance, which, as it were, reflects a typological case, the study of which turns out to be a universal ontology.

Giovanni Reale rejected totally the developmentalist view and tried to show the unity of the several conceptions of the science of Being by differentiating four 'perspectives' (*prospettive*) of this science that simultaneously exist in every level of Aristotle's treatment of the science of Being. These are the aetiological, ousiological, ontological and theological perspectives. Examining all the treatises of *Metaphysics*, Reale attempted to show that all have the same conception of the science of Being, since one can observe all four components of the science of Being in every treatise in which Aristotle attempts to establish the science of Being. Finally, he noted that, among these perspectives, the theological component constitutes the focal point for the other components, without which the science of Being could not be established:

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[24] Patzig (1979), p. 38.

> Thus the horizon of Aristotelian metaphysics is given by the dynamic or dialectical unity of the ontological, aetiological, and theory of substance perspectives centred in the theological component.[25]

More recently, Michael Frede has attempted to show the unity of the two conceptions of the science of Being. Frede claims that his reason for writing on this subject is to show that the answer given by Patzig to the riddle of the unity of the conceptions of the science of Being was correct. Nevertheless, he claims that, to win acceptance, Patzig's ideas need to be revised and elaborated in various respects.[26] Frede indeed elaborates Patzig's view by virtue of introducing some basic claims about the unity of the conceptions of the science of Being:

> (i) theology deals with beings of a certain kind, namely, separate substances. But in doing so, it also deals with a particular kind or way of being, a way of being peculiar to divine substances. (ii) It turns out that this way of being is the one in terms of which all other ways of being have to be explained, i.e., it turns out that a study of being as such resolves itself in three steps into a study of how all the different ways of being that characterize the different kinds of beings ultimately have to be explained in terms of the way of being that is characteristic of divine substances. (iii) since theology studies this focal way or sense of being, it also provides the natural point to discuss how all other ways of being depend on this primary way of being, especially since this primacy would seem to reflect the very nature of divine substances. In developing this explanation, theology does carry out at least the substantial core of the program of general metaphysics and to that extent can be identified with general metaphysics. This is one way in which theology, because of the primacy of its objects, will be universal. For, in taking into account the primacy of the being of its objects, it will also deal with the ways of being that are dependent on it. (iv) but general metaphysics involves more than this kind of ontology. It also discusses certain universal principles, like the principle of non-contradiction, and certain notions of universal applicability like the notions of unity and identity. Again, this can be explained in terms of the primacy of theology… (v) Admittedly, this will have the result that theology, or general metaphysics, has less internal unity than we might have expected.[27]

In Frede's view, the science of Being studies the 'way of Being' of certain substances. This 'way of Being' turns out to be the one on which the other ways of Being depend. The dependency relations pave the way for a universal study of Being through the study of a determined way of Being. In Frede's view, the science of Being does not need to study any particular Being. The science of

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[25] Reale (1980), p. 360.
[26] Frede (1987b), p. 83.
[27] *Ibid*. pp. 84-85.

Being addresses ways of Being that are peculiar to divine substances but it does not necessarily study any particular divine substances. Therefore, we have a universal science of Being dealing with a way of Being of divine substances, nevertheless it does not necessarily deal with God. What it deals with, in other words, is the peculiar way of Being shared by several Beings, namely the divine substances upon which all the other ways of Being depend; the study turns out to be a universal study of other ways of Being shared by other subordinating substances, e.g. non-eternal sensible substances.

Much of modern Aristotelian scholarship has clearly been devoted to determining whether it is possible to reconcile the two seemingly contradictory conceptions of the science of Being. The developmentalists attempted to solve the problem by admitting a shift in Aristotle's position. They identified different motivations as well as different paths for this development. Sometimes, for instance, as per Owen, the fundamental motivation for Aristotle's philosophical development is seen in his construction of the *pros hen* relation in Book Γ that distanced him from his description of the science of Being as theology, for instance in Book E and in Book Λ; sometimes, it is fundamentally psychological reasons,[28] as in the case of Jaeger, that accommodate a retrograde movement away from Platonism. What is interesting in this perspective is that the path of Aristotle's development sometimes veers towards a universal science of Being, sometimes towards a theological science. The developmentalists, therefore, do not arrive at a consensus and so the result is an unsatisfactorily complex picture of diversified views that raise more questions than they seek to solve.[29]

The view that we can reconcile the conceptions of the science of Being in Aristotle's *Metaphysics* also seems unsatisfactory for several reasons. Although its proponents more or less claimed that the *pros hen* relation is the key to the

[28] I owe this terminology to Charlotte Witt, who distinguished three types of developmentalist views, one of which is psychological developmentalism. Witt describes this thus: 'I call them "psychological" because typically they contain psychological conjectures or assertions about Aristotle's mind and his relationship to others, primarily Plato' (Witt (1996), p. 70).
[29] For a good criticism of the developmentalist theory, see Graham (1987), pp. 6-7.

problem of the unity of the conceptions of the science of Being, they nevertheless do not satisfactorily present the peculiar features of this relation in the way that one might expect. Perhaps this is why they do not give explicit answers to how in reality one is to place God at the centre of the *pros hen* relation so that the study of God would turn out to be a universal study of Being. In other words, they do not articulate the details of Aristotle's construction of Being in the *pros hen* way intended to pave the way for a particular Being, namely God, to be placed at the centre of all the manifestations of Being. Nor do they provide sufficient explanation for the relation of the characteristics of God in Book Λ to His being the central item in the *pros hen* of Being. This leads one to think these characteristics have nothing to do with God's being the focal subject matter of the science of Being and even that God has been given an accidental role in the science of Being, as we saw, for instance, in Frede's view.

This insufficient picture might not please the developmentalists as they, after all, are unsatisfied because of the difficulties in placing God at the centre of the *pros hen* structure of Being. Unless we can find a satisfactory answer to how in reality God might be placed at the centre of the *pros hen* relation, it seems impossible to compensate the essence of developmentalist critiques and this, I think, cannot be done without a thorough examination of the *pros hen* relation as well as the characteristics of God, so that one can show the characteristics given to God are exactly those required in order for Him to be regarded as the central instance of the *pros hen* structure of Being.

The lack of consensus on the unity of the conceptions of the science of Being led me to write this thesis in order to show effectively that Aristotle's enterprise in *Metaphysics* does not hinder reconciliation between the universal and the theological dimensions of the science of Being. Aristotle himself seems to be well aware of the problem:

> One might indeed raise the question whether first philosophy [πρώτη φιλοσοφία] is universal [καθόλου], or deals with one genus [περί τι γένος], i.e.

> some one kind of being [φύσιν τινὰ μίαν]; for not even the mathematical sciences are all alike in this respect; geometry and astronomy deal with a certain kind of thing [περί τινα φύσιν εἰσίν], while universal [καθόλου] mathematics applies alike to all. We answer that if there is no substance other than those which are formed by nature [φύσει συνεστηκυίνας], natural science [ἡ φυσικὴ] will be the first science [πρώτη ἐπιστήμη]; but if there is an immovable substance [οὐσία ἀκίνητος], the science of this must be prior [προτέρα] and must be first philosophy [φιλοσοφία πρώτη], and universal in this way, because it is first [καθόλου οὕτως ὅτι πρώτη]. And it will belong to this to consider being qua being – both what it is [τί ἐστι] and the attributes which belong to it qua being [τὰ ὑπάρχοντα ᾗ ὄν].[30]

This passage shows how, to Aristotle's mind, the problem of the unity of general and special metaphysics is averted. The universality of the science of Being is attained through the homonymous structure of Being in which the study of the primary instance paves the way for the study of the secondary instances through the necessary connections found between these items of *pros hen* of Being. According to what we have been told in this passage, I will argue, if the science of Being were not to be theological, that is, if it were not to deal with the highest kind of substance, it would not be universal either.

Accordingly, I will argue by focusing on the *pros hen* relation in close detail that Aristotle's construction of this structure necessitates that we place God at the centre of this relation; through studying God, we arrive at the other manifestations of Being that are still connected in a *pros hen* way to God by virtue of certain dependency relations. I will articulate these dependency relations and show that they necessarily confirm that we regard God as the primary subject matter of the science of Being. Furthermore, I argue that God is given the very characteristics He needs if He is to be the primary element in the *pros hen* structure of Being. In other words, Aristotle's thoughts in Book Λ with respect to the characteristics of God are exactly what is needed if he is to establish the relations of the *pros hen* structure of Being adequately. This will not only show that Book Γ and Book Λ belong to the same philosophical enterprise, but also that the discussion in Book Λ with respect to the attributes of God develops against the backdrop established in Book Γ, without which his enterprise in Book Λ would be unmotivated and otiose. Hence, the underlying

[30] *Met*. E, 1, 1026a23-32.

framework offered in Book Γ, namely the *pros hen* structure of Being, paves the way for a unified universal science of Being through God. God stands at the nexus of all the possible manifestations of Being, the study of whom would lead to universal knowledge of Being, that is, study of Being in the unqualified way or Being qua Being. Any successful development in this direction will I think, not only provide the most complete and forceful picture of the science of Being so far attempted while distancing us from the unsatisfactorily complex picture of developmentalist doctrines about the unity of the conception of the science of Being, but also make the text of *Metaphysics* highly readable.[31]

The thesis has five chapters. The first chapter treats the first two sections of Book A of *Metaphysics*, in which I show that the conception of the science of Being that we encounter in Book A is theological and that the reason for this is not its being Platonic or even early Aristotle but a doctrine that will be sharpened up in later stages of *Metaphysics*, which, as it were, is unquestionably Aristotelian.

The second chapter deals with Book Γ, in which I show that nothing that we encounter in this treatise with respect to the science of Being is incompatible with the later conceptions in Book E and Book Λ that are generally regarded as theological. I first analyse the reasons for Aristotle's establishing a special kind of relation between the instances of Being, namely the core-dependent homonymy (CDH - *pros hen*) upon which Aristotle establishes the science of Being. I then derive three basic criteria necessary for establishing CDH, after which I derive three types of substances by looking at the Aristotelian corpus. I

[31] Terence Irwin (2002) focuses on the methodology of the science of Being. To me, his position with respect to the two seemingly contradictory conceptions of the science of Being is very obscure as he seems to be taking for granted that the science of Being focuses *solely* on first principles such as the principle of non-contradiction and does not mention the theological dimension of this science. Now it may be that there are some philosophical purposes in which such a stance would not yield immediate adverse results and we might suppose Irwin's examination of first principles is one of those, but nevertheless such a stance, I think, is a representative take on the science of Being that is radically in error, since we might quite naturally think that one of the concerns of a metaphysician must be God. I think, therefore, it is not that Irwin is taking a firm position which is wrong but rather that he cannot really be describing what the science of Being is like if there is no theological component involved in the discussion.

will test these substances against the criteria developed hitherto. Through this assessment I hope to show that the best candidate for standing as the core item in the CDH of Being among the several types of substances is God.

In chapter three, I first examine Aristotle's introduction of the two tasks of the science of Being, namely 'what it is' and 'if it is', and show that these are fully compatible with what Aristotle maintains with respect to the science of Being in Book Γ. Later I examine the division of sciences and the criteria upon which this division is established, namely separation and immobility. I show that these criteria, which fully establish the grounds for a theological science, are compatible with the criteria described in Book Γ.

In chapter four, I examine the middle books of *Metaphysics* and show that the conception of the science of Being that is implicitly espoused by Aristotle in these treatises and his remarks on the definition of substances are compatible with the stated doctrine in Book Γ and Book E.

Finally, in chapter five, I deal with Book Λ and attempt to show the necessary place it has in the treatises of *Metaphysics*. I claim that Aristotle's inquiry into the nature of God in Book Λ constitutes the summit of his enterprise in establishing the science of Being. In this chapter, I will show that God is given the very characteristics He has to be given if He is to be regarded as the core instance of the CDH of Being and so attempt to show the necessary connections between Book Λ and the rest of the treatises of *Metaphysics* in which Aristotle establishes the science of Being.

My greatest debt is to my supervisor, Professor Michael Morris, for keeping me on track, posing intriguing questions which often lead to new avenues of inquiry and helping me to always keep the thesis as a whole in mind. Were it not for his kindly attention, superior knowledge, pedagogical patience, and marvellous generosity of mind, I would never have been directed down the path leading towards the eventual production of my thesis. I must acknowledge

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CHAPTER I

The first traces of Aristotle's examination of Wisdom (σοφία), later named First Philosophy (πρώτη φιλοσοφία), which confirms the priority of this science amongst the other sciences,[1] are visible in Book A, in which Aristotle introduces Wisdom first by inquiring into the major concepts that will be used to establish the science and later by investigating its defining characteristics. This chapter follows Aristotle in determining the main characteristics of Wisdom and picks up the traces of a more complete picture, which Aristotle had in mind when he composed Book A and which are actually established in later parts of the treatise.

Book A is generally acknowledged to be an early work written by Aristotle just after he left the academy. That amounts to saying that Book A corresponds to an earlier stage in Aristotle's philosophical development for which reason it should be regarded as eminently Platonic in spirit. This stance, popularised by Jaeger,[2] has more or less become the orthodox view of contemporary scholarship. Chroust, for instance, notes:

> Today, no one will seriously question Jaeger's main thesis that Aristotle started out as an adherent of Plato's metaphysics, ethics, and politics, and ended by setting up what must be called his own system.[3]

On this view, Book A is considered to reflect an early 'Platonic stage' in Aristotle's philosophical development. Significantly, once Book A is agreed to be an early work, scholars attribute its theological character to its stage in Aristotle's development and to the Platonic stance, which they attribute to him at that stage. The early stage of Aristotle's philosophical development is accordingly associated with the theological stance, when Aristotle's concerns

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[1] Throughout Book A, Aristotle does not use the term 'First Philosophy' (πρώτη φιλοσοφία). The term initially emerges in Book Γ, in which Aristotle begins his first systematic efforts to establish this science by averting possible problems with respect to its unity.

[2] Jaeger (1962), p. 173ff.

[3] Chroust (1996), p. 64. Even more, 'unitarian' scholars, such as Reale, accept that Book A is Platonic in spirit. Cf. Reale (1980) p. 37, where he says 'Thus Aristotle, at the time of Book A, would not have been fully conscious of the distance that divided him from Plato and therefore continued to consider himself his disciple'.

for the science of Being concentrated on developing a theory of God or, if you will, a *metaphysica specialis*. According to this interpretation, since, as expressed in the passage I cited from Chroust, Aristotle later departed from Plato, he abandoned the theological stance adopted initially that was genuinely rooted in a Platonic perspective. As a result of this 'development' in Aristotle's views, in later stages the theological characteristic of the science of Being is discarded and his attention turns to terms such as Being qua Being. On this view, the characteristic of the science of Being he has in mind in this second stage reformed into a general science of Being, i.e. *metaphysica generalis*. One can see this outlook, for instance, in Walter Leszl:

> …we must ask how representative are the views expressed in these two chapters [A 1-2] (esp. in the second) of Aristotle's final position on the nature of ontology and that of theology. It would seem to me that there are two reasons why these chapters cannot be taken as expressing Aristotle's definitive position on the subject, one of them being that they are likely to have been written rather early in his career, and the other being that they do not aim at providing a rigorous and thoroughgoing treatment of the argument.[4]

It seems that for Leszl, not only its being a treatise of an early stage but also its introductory character, namely being sometimes dogmatic and not being rigorous, make Book A rather unreliable in terms of its doctrinal statements. Although the introductory character of Book A itself may be employed to provide some explanation of its not being rigorous at times, this treatise is proposed to be discarded also on the basis of its having been written in a rather early stage in Aristotle's career.

Now, I admit that one can find obvious traces of Platonism in Book A and that it is also a theological treatise. In fact, part of what I do in this chapter is to confirm that the conception of the science of Being in Aristotle's mind in Book A is indeed eminently theological. What I do not want to agree with in the orthodox view, on the other hand, is that the *reason* underlying Book A's being theological is because it is an early work and is Platonic. I believe, however, that the theological appearance of Book A does not follow from its being an early

[4] Leszl (1975), p. 107.

work and Platonic but derives from the doctrine that will be sharpened up in later stages of *Metaphysics*, which, is unquestionably Aristotelian. In other words, it is Aristotle's own convictions and his own position with respect to the science of Being that will be developed in the later stages of *Metaphysics* that validate Book A's theological stance rather than some external factor such as Platonism. That amounts to saying that Aristotle's position with respect to the science of Being does not undergo serious change after Book A and that what he maintains here in Book A is in line with what he espouses in the later, more developed, doctrine of the science of Being in further treatises of *Metaphysics*.

Part of the justification for this claim cannot be supplied without a thorough comparison between the conception of the science of Being in Book A and in the other treatises of *Metaphysics*, especially those where Aristotle makes some effort to establish the science of Being (e.g. Book Γ and Book E). My examination of the conception of the science of Being in *Metaphysics* provides such an assessment. This chapter will primarily be concerned with Book A and of course the theological conception of Book A can only be shown to be reconcilable with the rest of *Metaphysics* once other treatises of *Metaphysics* have also been examined. Hence, my conclusions in this chapter can only be provisional. This makes my argument seem tentative at times simply because I cannot treat all the possible articulations of the doctrines of Book A in later treatises of *Metaphysics*. However that may be, in this chapter, I will attempt to defend my position as far as possible, i.e. that the reason underlying Book A's being theological is not to be sought in its being Platonic and that the characteristics evident in Aristotle's examination of the science of Being in Book A can indeed be regarded as being in line with what he maintains later in the further treatises of *Metaphysics*. Hence, in my discussion, I shall emphasise the introductory character of Book A and its doctrinal guidance throughout Aristotle's attempt to establish the science of Being, since I believe the characteristics derived in this introductory stage are not ignored by Aristotle at any later stage of the establishment of the science of Being.

The plan of the first section of Book A might not be immediately apparent to the first-time reader. Aristotle's aim is not stated until approximately the middle of the chapter: '…but the point of our present discussion is this, that all men suppose [ὑπολαμβάνουσι] what is called Wisdom [σοφία] to deal with the first causes [περὶ τὰ πρῶτα αἴτια] and the principles [τὰς ἀρχὰς] of things'.[5] His chief aim, as indicated by this statement, is to settle the basic subject matter of Wisdom, which is described as 'the first causes (πρώται αἰτίαι) and the principles (ἀρχαί) of things'. Right from the beginning of the chapter, Aristotle emphasises the priority of the genuine knowledge of things by articulating men's desire to know. As proof of this desire, Aristotle points to the senses: most of all, the sense of sight. A short examination of the intellectual states of animals assists him in deriving some of the major concepts that will be used in the establishment of Wisdom.[6] With the help of these concepts, Aristotle formulates a hierarchy of knowledge, which helps him to find the precise place of the science he investigates, i.e. Wisdom amongst the other sciences.

The central theme of the first two sections of Book A is that man's perfection and his happiness lie in the knowledge attained through successive stages. Pointing out that men naturally (φύσει) desire (ὀρέγονται) knowledge (εἰδέναι), Aristotle claims that the basic motivation of man's progress towards knowledge lies in his nature.[7] Hence, men, by their nature, are directed towards the end (τέλος) through some knowledge of things. The end corresponds both to the highest level of knowledge and to the happiness and perfection of the human soul. In the course of Book A, Aristotle's presentation of the hierarchy of knowledge pays particular attention to this highest stage of knowledge. Aristotle mentions 'nature' as the main motivator for seeking this highest form of knowledge and this 'nature' becomes apparent in both man's desire and the organisation and structure of his organism, i.e. his sense organs, his memory (μνήμη) and his intellect (νοῦς). The structure of man's organism is unique in the sense that it is differentiated from other animals, mostly by its complex

[5] *Met*. A, 1, 981b27.
[6] *Met*. A, 1, 980a27–980b25; 980b25–981a12.
[7] πάντες ἄνθροποι τοῦ εἰδέναι ὀρέγονται φύσει. *Met*. A, 1, 980a20.

faculty of intellect.[8] This constitutes the majority of what Aristotle means when he says 'nature' in the context of the introductory sentence of Book A. All men therefore desire to know because of their intellectual nature, which is unique and which directs them through the stages of knowledge to Wisdom and happiness as the highest status that can be attained. Animals other than men neither desire nor can attain such knowledge and happiness.[9] The basic motivation for man's desire does not depend on some practical end but on the very nature of man, which makes him proceed even if he does not derive any practical benefit. Hence, men desire Wisdom not for any practical end but for its own sake.[10] The basic motivation, then, is not self-interest or the attainment of some necessities in life; rather, it is the nature that has to be fulfilled and that directs man to the highest form of knowledge.[11]

1.1. The Hierarchy of Knowledge

In the first section of Book A, Aristotle presents a hierarchy of knowledge. The hierarchy we encounter in this part of *Metaphysics* is not in itself an inquiry into epistemology; rather, in establishing this hierarchy, Aristotle has a definite purpose in situating the science of Wisdom amongst the epistemic levels that are ranked, as we shall see, by virtue of a definite criterion. What I aim to show in this part, accordingly, is that in presenting the hierarchy of knowledge, Aristotle aims at a certain terminus marked by the highest science of Wisdom without which the enterprise would not make sense at all.

In the first section of Book A, one gets the feeling that the criterion that makes any kind of knowledge higher than another is increasing knowledge of the causes. Accordingly, as one attains higher knowledge of the causes of things, one attains a higher status in the hierarchy of knowledge. A particular kind of knowledge escapes from the fetters of ordinary experience as it investigates the

[8] *Met*. A, 1, 980b25.
[9] *Met*. A, 1, 980b26.
[10] *Met*. A, 2, 982a15; 982a31; 982b20.
[11] *Met*. A, 1, 981b20; 2, 982b20.

higher causes and principles of things. The inquiry eventually yields to the ideal of absolute science, namely Wisdom, whose precise subject matter is the highest and the ultimate cause of things.

Now, let us examine the details of this hierarchy of knowledge starting with the first stage, where one finds the origins of any knowledge with respect to things and wherein the hierarchy proceeds all the way through to the last stage, that is, the terminus, towards which all knowledge is directed and where it is fulfilled.

1.1.1. Sense Perception (Αἴσθησις)

Perception was the cause of numerous debates in ancient Greek philosophy. Discussion of sense perception sprouts from the fundamental question, which addresses the epistemological status of the knowledge one might gain through one's sense organs. Numerous other questions surrounding this fundamental question produced one of the most important and fertile debates amongst the ancient Greek philosophers.[12] I shall not go into the details of the discussion per se, since many of the questions concerning this theme do not have a bearing on the main points that this essay is intended to articulate. In fact, this is in accordance with Aristotle's presentation of perception in the first section of Book A, since he too inquires into perception with the aim of presenting the foundations of Wisdom rather than to engage in a discussion that considers perception per se, which is actually examined in other parts of his corpus. Correspondingly, my sole aim in this part of my essay is to locate the role of perception in Aristotle's initial establishment of Wisdom in the first section of Book A.

I should record straightaway that Aristotle's position on the epistemic status of the knowledge we gain from sense organs seems to be rather different from

[12] For instance, whereas one of these questions asks whether perception arises from similarities or from opposition between the object that is perceived and the sense organ, the other asks whether there should be a 'medium' between our sense organs and the object perceived. One can find a comprehensive exposition of these ancient debates on perception in Theophrastus's *De Sensu*.

what I would call the conventional approach of the time, which marks all the Greek philosophers. The status of the knowledge gained through senses is demoted first by the doubts of Eleatic philosophers and later by Plato's systematic criticisms that resulted in the entire exclusion of senses from the realm of knowledge. The traces of this negative attitude start with the pre-Socratic philosophers who, though not as systematic as Plato, diminished the status of the knowledge we gain through our sense organs.[13] The conventional approach, established mostly by Parmenides, is adopted by all the pre-Socratic philosophers. One may be inclined to think that Empedocles and the atomists are indeed on the side of perceptual knowledge and so they cannot be involved in the conventional approach of the time. Aristotle himself has criticized Empedocles and the atomists for supposing that all knowledge is sensation.[14] If we examine this in detail, however, the fragments prove that they too do not support the view that a genuine knowledge of things can be attained through the sense organs. Hence I venture to claim that even if these philosophers do

[13] The first traces of this approach can be observed in Parmenides, who rejects senses as reliable sources of our knowledge of the Universe (fr. 7). Parmenides makes a significant connection between the status of perceptual knowledge and the dichotomy between truth (ἀλήθεια) and opinion (δόξα) by correlating perception with opinion and reason with truth (Simplicius, Fr. 8, *in Phys*. 30, 14.30, 14). By virtue of this claim, Parmenides establishes the main attitude of the conventional approach of the time, that the knowledge gained through our sense organs is neither accurate nor can be employed to reach further epistemological levels. The truth, in other words, can be attained through reason, rather than through the senses that can only shape our opinions about things. The conventional approach is further supported by Heraclitus as well, though not as plainly as in Parmenides. In fragment 54, for instance, Heraclitus states, 'An invisible harmony is stronger than a visible one' (ἁρμονίη ἀφανὴς φανερῆς κρείττων – trans. mine), a sentiment which seems to distinguish the visible (φανερῆς) from the invisible (ἀφανὴς) and prefers the former to the latter. The overall conception of reality, the 'invisible harmony' (ἁρμονίη ἀφανὴς), cannot immediately be grasped by the sensory organs and hence perceptual knowledge is not the right tool for any inquiry into the hidden secrets of reality. On the other hand, fragments such as 'I prefer the knowledge gained through seeing and hearing' (ὅσων ὄψις ἀκοὴ μάθησις, ταῦτα ἐγὼ προτιμέω. (trans. mine) Fr. 55, Hippolytus *Refutatio* IX, 9, 5) and 'eyes and ears of men who have soul that is foreign to their evidences, are bad witnesses' (κακοὶ μάρτυρες ἀνθρώποσιν ὀφθαλμοὶ καὶ ὦτα βαρβάρους ψυχὰς ἐχόντων. (trans mine) Fr. 107, Sextus, *Adv. Math*. VII, 126) seem to suggest that the sensory organs are indeed reliable sources of knowledge. Fragment 55 exalts perceptual knowledge, probably to contrast both knowledge gained through words and knowledge gained by inspiration, perhaps once used by Homer and Hesiod. It is, however, not yet clear whether this perceptual knowledge is sufficient to reach the ultimate reality. In fr. 107, Heraclitus does not blame the sensory organs but the people who have a 'βαρβάρους' soul for not grasping the reality. It is not, in other words, the sensory organs that are 'bad witnesses' but the 'βαρβάρους ψυχὰς' which are alien to reality itself. These fragments blurred Heraclitus's position about the discussion on whether perceptual knowledge is reliable or not.

[14] *Met*. Γ, 5, 1009b13.

indeed trust sensation more than any other philosophers in the ancient era, they too are not so far removed from the conventional negative attitude of the time towards perceptual knowledge[15] and the negative attitude upheld by all the Greek philosophers until Plato, who presents the most advanced form of this approach by excluding almost all the evidence grasped by senses from the realm of genuine knowledge. Plato continued the Parmenidian formula that correlates senses with opinion (δόξα) rather than truth (ἀλήθεια).[16] Plato's position, however, is more radical than that of his predecessors, as he not only states that we cannot reach the truth by perception, but he also defends the notion that the senses mislead us in our inquiry into truth.[17] Hence, according to Plato, truth can only be attained through the intellect untroubled by senses.[18]

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[15] It is true that Empedocles defends senses, as he affirms that they can channel us to truth (Cf. frr. 2–3, Sextus *Adv. Math.* VII, 123–125). Unlike Parmenides, he apparently claims that it is possible to reach further epistemic levels through senses. Even in these passages, however, in which Empedocles seems to defend senses, it is not clear whether he goes so far as to claim that we can reach the truth *solely* through our senses. It seems that another alternative is preferable, the faculty of understanding, as a tool to reach the genuine principles of things. As for these principles, he determined Love (Φιλότης) and Strife (Νεῖκος), which govern the basic conversion of four materials into each other by unifying and separating them. These, however, are metaphysical rather than empirical principles, since even if their effect can be observed empirically, they can ultimately be grasped by the understanding (Cf. frr. 22–23, Simplicius *in Phys*. 159, 13–27). Such doubts concerning the status of the knowledge we gain through our senses can be observed more clearly in Democritus. He has not only proclaimed as clearly as possible the unreliability of such knowledge (fr. 9, Sextus *Adv. Math.* VII, 135–136) but also upheld the Parmenidean attitude that combines senses with opinions rather than truth (frr. 6–8 and 10, Sextus *Adv. Math.* VII, 136). According to Sextus, Democritus differentiates two types of knowing: one through the senses (διὰ τῶν αἰσθήσεων) and the other through intellect (διὰ τῆς διανοίας) (fr. 11, Sextus *Adv. Math.* VII, 138). Of these two types, he finds only the latter, knowing through intellect, 'legitimate'. The former, however, is rejected and excluded from the realm of the genuine knowledge of things. These fragments show that even Democritus and Empedocles questioned the inerrancy of perceptual knowledge.

[16] *Timaeus*, 28a–c; *Theaetetus*, 179c; *Sophist*, 264b1; *Philebus*, 38b12.

[17] *Phaedo*, 65c; *Timaeus*, 43c7.

[18] If one considers Plato's metaphysical doctrine, one can easily understand that such a conclusion is a natural result of his metaphysical standpoint, since all the forms that he set out as the ultimate metaphysical principles are far removed from perception. Since these metaphysical principles constitute the whole reality, and since they are non-spatial and non-temporal principles, they are connected to intellect rather than the senses (*Phaedo*, 65d–66a). The attempt to reach these principles should employ the intellect alone rather than the senses. In fact, this process involves the gradual exclusion of the senses, a type of purification, in which the soul is separated from the body so that the senses do not interrupt the intellect in its journey to the reality (*Phaedo*, 66d–67e). Since the soul is together with the body in all phases of life, Plato doubts that we can reach the ultimate reality while we live. The examination of the ultimate principles should be carried out with the soul and the intellect alone. Senses, on the other hand, are seen as mere obstacles that interrupt the soul in its inquiry into truth. Correspondingly, Plato correlates the soul with what is divine and intelligible and the senses with what is mortal and unintelligible (*Phaedo*, 79c4–80c).

Perceptions, being inadequate and deceptive, summon understanding to carry out an investigation just to get rid of the inadequacies that these senses might produce. In other words, it is the improper data coming from sense organs that direct understanding to inquire into this evidence in more detail. Whereas perceptions produce a mixture of opposites, and therefore confuse us in our inquiry into truth, understanding separates what should be separated and reaches certain results that produce some reliable knowledge.[19] Hence, Plato separates what is visible and is naturally combined with senses from what is intelligible. Without the faculty of understanding, perceptions are not capable of producing any knowledge that can direct us to truth; on the contrary, in such a case, senses could only lead us to confusion.[20]

These remarks imply that Plato's words do not permit an unequivocal interpretation and only in this way will his theory of knowledge be in accordance with his metaphysical theory. Obviously, this understanding of Plato's doctrine demands a defence I cannot on this occasion provide but it is enough to conclude that Plato has systematised the conventional approach of the time that was established by his predecessors. This approach, however, is challenged by Aristotle, who is not too ready to share what his predecessors think of the status of perceptual knowledge.

In what follows, I will show that Aristotle converts the conventional approach by taking a positive attitude towards sense perception. Perception is no longer seen as a negative tool whose evidence should be doubted, as stated by Democritus; neither should it be associated with opinion rather than truth, as in the case of Parmenides, nor be taken as a deceptive element that precludes the soul in its inquiry into truth, as stated by Plato. It is rather a useful tool that should be employed if one is to reach the truth. In fact, the senses can be seen as part of our soul,[21] an inseparable constituent of our nature, thanks to which we attain the first stages of our knowledge. The passages regarding senses that

[19] *Republic*, VII, 524b–e.
[20] *Epinomis*, 977c; *Letters*, VII 343c.
[21] *De An*. II, 2, 413b9; 414a12; III, 9, 432a16; *SS*. 1, 436a8; 436b6.

permeate his corpus support this thesis, as they are all written in a positive manner and do not contain the pejorative attitude towards senses that one can encounter in his predecessors.[22] It is this positive attitude that continues in the opening sentences of Book A, in which Aristotle starts his inquiry into Wisdom:

> All men by nature [φύσει] desire [ὀρέγονται] to know [εἰδέναι]. An indication of this is the delight we take in our senses [τῶν αἰσθήσεων]; for even apart from their usefulness [χωρίς τῆς χρείας] they are loved for themselves [ἀγαπῶνται δι' αὐτάς]; and above all others [μάλιστα τῶν ἄλλων] the sense of sight [ὀμμάων]. For not only with a view to action [ἵνα πράττωμεν], but even when we are not going to do anything, we prefer [αἱρούμεθα] sight [τὸ ὁπᾶν] to almost everything else. The reason is that the senses, most of all, makes us know [γνωρίζειν] and brings to light many differences between things [πολλὰς δηλοῖ διαφοράς].[23]

According to Aristotle, our knowledge depends upon the necessary classifications, that is, 'the differences [διαφοράς] between things,' and it can be attained by the precise evidence presented by the sensory organs. Contrary to his predecessors, Aristotle thinks that this evidence is a reliable source of our knowledge.[24] Hence, contrary to Plato's understanding, for Aristotle, perception is indeed a kind of knowledge.[25] The starting-point of all knowledge is located in the sensory organs, providing an initial knowledge that can be treated by higher faculties such as understanding (νοῦς), thanks to which it is converted into a higher knowledge.[26] Therefore, the higher knowledge of things, whether practical or theoretical, is initially gathered through the senses. This conversion of the conventional approach of the time should be justified to the full, especially in the face of the conventional systematic approach, and this requires more than just a new theory of perception. Accordingly, this approach entails the defence of precise epistemic and ontic grounds against the preceding

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[22] Obviously, in this positive approach, one should not arrive too hastily at the conclusion that we live or gain knowledge solely on the basis of our senses. On the contrary, a person who lives only through their senses should be regarded as 'brutish' (θηριώδεις). Cf. *EN*. VII, 5, 1149a10. Furthermore, one must note that according to perception is a kind of 'γνῶσίς' rather than 'ἐπιστήμη'.

[23] *Met*. A, 1, 980a21-27.

[24] See, for instance, *De An*. III, 3, 427b10, in which Aristotle affirms that perception of special objects is free from error while it is possible for 'thinking' to be mistaken.

[25] See *GA*. I, 23, 731a33, where Aristotle says that perception is a kind of 'γνῶσίς' (note, however, that he regards perception as 'γνῶσίς' rather than 'ἐπιστήμη').

[26] Cf. *SS*. 1, 436b18ff.

theories, and this is one of the major projects pursued by Aristotle throughout his corpus.[27]

Perception is where we start investigations that are intended to carry us through the first principles. The path to the highest principles, however, is not as clearly defined as one might think in the first instance. There are many other

[27] Owing to space limitations, I cannot present here all the details of this justification beyond saying that the possibility of attaining knowledge through sense organs depends primarily on Aristotle's theory of perception. According to this theory, every sense is designed for a special type of perceptible object (*De An*. III, 2, 425a20; *PA*. II, 1, 647a5). It is possible to explain this phenomenon from two parallel perspectives that are actually identical. From the perspective of a sense organ, it is possible to affirm that it can fundamentally perceive two things: first, the special object for which it is designed, and, second, the common facts that are perceived by all the senses (*Top*. I, 15, 106a30; *SS*. 4, 442b4; *OS*. 2, 455a13; *OD*. 1, 458b5). From the perspective of the object perceived, it is possible to observe three major groups of sensibles: first are the special objects whose perception is the most accurate of all, second are the accidental attributes (e.g. green) that may be mistakenly perceived at some level, and lastly come the common attributes, such as movement and magnitude, whose perception may involve the greatest amount of sense illusion (*De An*. II, 6, 418a11; III, 3, 428b18–25). The last two groups correspond to the 'common facts' that are perceived by all senses. If sensible is a special object of sense, the sense is most accurate simply because the sense organ is particularly designed to fit that special object. On the other hand, the reason that perception errs in the common attributes is that we do not have a special sense particularly designed to perceive these attributes. In order to raise the accuracy of the perception of these accidental and common attributes, we need more than one sense organ, and this is the underlying reason for our possession of five senses (*De An*. III, 1, 424b20; 425b4–11). Hence, there is a reciprocal relation between the senses and the sensibles. In order for a perception to be accurate, the two poles of this reciprocal relation should fit each other properly. When the sensible is a special object of sense, which is designed to fit that particular sensible, sensation will not err and will give accurate data.
Aristotle's theory of perception is established upon his doctrine of actuality and potentiality. He describes sense organs as mere potentialities of what they are designed to perceive (*De An*. II, 5, 416b33; III, 2, 426a23; 8, 432a2; 11, 424a4; *Met*. IX, 5, 1047b32; *EN*. II, 1, 1103a28, 29). To put it briefly, perception is a process in which potentialities turn into actualities. It has two dimensions: one is the sensible object that actually exists outside and the other is the sense organ that is an innate potentiality. Before perception, we have a potentiality that is capable of being affected by what it is designed for; after perception, this potentiality is the form of the actual independent object. Hence, when the actual external perceptible object is perceived, what potentially exists turns into an actual being in the soul (*De An*. III, 12, 424a18) and so the sense organ is in a way unified with its object. What is perceived by the sense organ is the form (εἶδος) of the sensible object and this is what the soul, which is itself a kind of form, is actually unified with (*De An*. II, 12, 424a18ff.; III, 2, 425b25; 8, 431b29; *OD*. 2, 459a24). (Scholars have discussed whether this unification should be regarded as literal or not. For this discussion see, for instance, Sorabji (1992), pp. 209 ff.; Freeland (1992), pp. 231 ff.) The fact that Aristotle employs actuality and potentiality shows that he conceives of perception as a dynamic process. According to his theory, perception is a certain type of movement in which some constituent parts of an animal undergo a change. Sensation, therefore, can be understood as an alteration (ἀλλοίωσις) in the soul through which we attain knowledge (*Phys*. VII, 2, 244b11; *De An*. II, 4, 415b24; 5, 417b3; *OS*. 1, 454a9; *MA*. 7, 701a17). This is a real alteration leading to the knowledge of things. A soul, therefore, is not something that *has* knowledge, but rather a dynamic constituent of an animal that is unified with what it knows by taking the form of that object. Hence, it can be regarded as everything that it knows: almost everything that can be told of an animal (*De An*. III, 8, 431b20).

steps that have to be taken in the hierarchy of knowledge before one reaches the highest causes and principles of things.

1.1.2. Memory (μνήμη), Imagination (φαντασία) and Recollection (ἀνάμνησις)

Memory can be regarded as the second step in Aristotle's hierarchy of knowledge. Indeed, it plays a role that although significant might be overlooked in the first instance. Amongst animals, it is a sign of intelligence to have a memory, as it enables higher kinds of knowledge beyond the knowledge gained though sense perception. In other words, without memory, animals would only live by means of some kind of knowledge gained through sense perception that would in no way proceed to higher kinds of knowledge.

But what is the actual role played by memory in the attainment of higher kinds of knowledge?

In order to answer this question, one needs first to determine an important feature of sense perception. I have previously noted that Aristotle's positive attitude towards sense perception differentiates him from his predecessors. It should not be understood from this initial fixing of the subject, however, that Aristotle binds all knowledge to sense perception; on the contrary, though sense perception nourishes the higher faculties, allowing for the production of higher kinds of knowledge by the data it gives through the sense organs, the role of this faculty is quite limited in the sense that it is, by itself, not sufficient for higher kinds of knowledge. The epistemic restriction of the faculty of sense perception to relatively narrow boundaries arises from the fact that perception is necessarily linked to particulars; the limits of sense perception are determined by the limits of the particular. Knowledge, on the other hand, should be correlated with universals:

> What actual sensation [ἐνέργειαν αἴσθησις] apprehends is individuals [καθ' ἕκαστον], while what knowledge [ἐπιστήμη] apprehends is universals [τῶν καθόλου], and these are in a sense within the soul itself. That is why a man can think [νοῆσαι] when he wants to but his sensation [αἰσθάνεσθαι] does not

> depend upon himself – a sensible object [τὸ αἰσθητόν] must be there [ἀναγκαῖον γὰρ ὑπάρχειν]. A similar statement must be made about our knowledge of what is sensible [τῶν αἰσθητῶν] – on the same ground, viz. that the sensible objects are individual [καθ' ἕκαστα] and external [ἔξωθεν].[28]

Accordingly, one might well see that there is an apparent gap between perception (αἴσθησις) and knowledge (ἐπιστήμη) and the gap is as wide as the difference between individual (καθ' ἕκαστον) and universal (καθόλου). Since Aristotle affirmed that perceptions are the true origins of our knowledge, he must show how these perceptions yield the proper knowledge of things by filling the cognitive gap between the individuals and universals.[29] In particular, this line of thought necessitates that Aristotle should show how 'individual' (καθ' ἕκαστα) and 'external' (ἔξωθεν) objects of perception are converted into 'universal' (καθόλου) and 'internal' objects of knowledge. I am inclined to think that the exact cognitive function of memory springs from this apparent gap between individuals and universals and, correspondingly, between perception and knowledge. Hence, memory, thanks to which the perceptual data are somehow converted into universal objects of knowledge, is necessary for the attainment of higher epistemic levels.[30] In what follows, I will attempt to present, at least in rough terms, how memory might in reality be regarded as a cognitive bridge between perception and knowledge.

Aristotle's central discussion in *De Memoria* focuses on memory and recollection.[31] These two elements, as I will show, play a significant role in the transformation of perceptual data into universal knowledge. One additional feature should be added as an essential link in this bridge, that is, imagination.

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[28] *De An*. II, 5, 417b22–28. The fact that sense perception is connected to individuals and knowledge to universals is confirmed in many places in the Aristotelian corpus. See, for example, *An. Post*. I, 18, 81b6; 31, 87b29; 24, 86a29; *Phys*. I, 5, 189a6; *Met*. B, 4, 999b3; Δ, 11, 1018b32; *EN* VI, 8, 1142a27.

[29] The problem concerning the gap between particulars and universals in Aristotle's philosophy is a significant one that should be dealt with in its own right. This part is simply intended to show how Aristotle breaches the gap between the perceptual knowledge of the particulars and the scientific knowledge of the universals in terms of cognitive faculties such as memory and imagination.

[30] Cf. *An. Post*. II, 19, 99b36; *VV*, 4, 1250a35.

[31] I agree with Julia Annas when she says that memory and recollection are not two different faculties but that they are two different kinds of memory (1992, p. 298). In terms of my aims in this part, however, it would not make any difference if I had chosen the opposite, i.e. if I had chosen to believe that memory and recollection are two different faculties.

Together with memory and recollection, imagination completes the structure needed for Aristotle to establish the essential cognitive link between perception and knowledge. Memory can be regarded as the first step in the conversion of perceptual data into knowledge.[32]

Aristotle insists that memory is always related to the past.[33] Correspondingly, we neither have a memory of the present nor do we have a memory of the future.[34] Hence, memory can be contrasted with perception since perception is always related to the present whereas memory is always related to some past experience.[35] Additionally, it can also be contrasted with opinion (δόξα) or expectation (ἐλπιζόν) since memory is not open to some future expectation.

Now, what can be said about the importance of this feature of memory in the role it plays in the hierarchy of knowledge?

When we think that we know something, we do not necessarily remember the past experience that is associated with this knowledge.[36] It seems that, according to Aristotle, there cannot be memory of some knowledge without the experience of the learning process itself that accompanies it. For instance, I may know that a triangle has 2Rs, but I can have a memory only of my learning that a triangle has 2Rs. The timeless knowledge, that the triangle has 2Rs, however, does not belong to the memory. Memory itself, then, seems not to be sufficient to build the linkage between perception and knowledge. Apart from this,

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[32] My aim in this part is not to engage in discussions springing from Aristotle's conception of memory, recollection and imagination. Such discussions, though I find them quite essential, would exceed the limits of this essay. Hence, one may find this part of the piece fairly shallow and excessively constructive. I believe, however, that the overall picture that I present is accurate and can be defended on the basis of textual evidence.

[33] *De Mem*. 1, 449b15; 449b24–30; 450a19; 2, 451a29.

[34] *De Mem*. 1, 449b10.

[35] *De Mem*. 1, 449b13.

[36] According to Annas (1992, p. 299 ff.), this is the crucial point that divides what she calls personal and non-personal memory. According to this division, personal memory is always of a past experience, but non-personal memory is not necessarily so. Hence, in Annas's example, personal memory corresponds to my knowledge of my learning that Caesar invaded Britain; non-personal memory, on the other hand, corresponds to the knowledge that Caesar invaded Britain without the remembrance of my learning this fact. I shall follow her interpretation in general terms in my presentation of memory and recollection.

however, it still plays a significant role in the path towards genuine knowledge of things. One might grasp the specific role of memory in the hierarchy of knowledge if one articulates the precise relation between this faculty and perception. Indeed, Aristotle affirms that memory is essentially related to perception.[37] Memory, according to this conception, is where some images (φαντάσματα) are stored. These images, as I will explain, play a crucial role in the transition from perception to thought and correspondingly from perception to knowledge.

> Accordingly, if asked, of which among the parts of the soul [τῆς ψυχῆς] memory [μνήμη] is a function, we reply: manifestly of that part to which imagination [φαντασία] also appertains; and all objects of which there is imagination are in themselves [καθ' αὐτὰ] objects of memory, while those which do not exist without imagination are objects of memory incidentally [κατὰ συμβεβηκὸς].[38]

One might proceed along these lines by arguing that the essential objects of memory are images that are connected to perception.[39] Hence, though memory is not sufficient to establish the cognitive connection between perception and knowledge, it can establish a linkage between perception and some other faculty, which in turn may fill the remaining gap between perception and knowledge. Since there should be an intervening faculty building up the basis for the first departure from rough perceptual data towards knowledge, and since this is the role of memory, we may reasonably claim that memory is essential in the attainment of proper knowledge of things; the perceptual data, therefore, are stored in the memory in terms of images and this takes us to our next step, namely imagination (φαντασία),[40] which plays the most significant role in the conversion of perceptual data into knowledge.

Though memory provides the basis for imagination, it is actually the imagination that is responsible for the transition from what is perceptible to

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[37] *De Mem*. 1, 450a12.
[38] *De Mem*. 1, 450a22-25. Cf. *De Mem*. 1, 450a10; 451a15.
[39] *De Mem*. 1, 450a22.
[40] Many scholars reasonably doubted that φαντασία should be translated as 'imagination'. For a good discussion of this topic, see Schofield (1992), pp. 249–252 and Dorothea Frede (1992), pp. 279–280.

what is intelligible. Since the precise role of imagination is to promote the transition from perception to thought and knowledge, it has both similarities with and differences from the faculties of perception and thought. These differences and similarities allow imagination to help in bridging the gap between perception and thought.

The ability of imagination to convert the sensible data into base structures of knowledge is one of its major differences from memory. It would be apt, at this point to recall that memory is always of a past experience and this is what detaches it from timeless truths, such as a triangle having 2Rs. Roughly, this barrier, namely the essential connection with what is past, is averted in the case of imagination. I may imagine something even if I do not remember my particular experience of it. Hence, contrary to memory, imagination is not time-dependent. Although this feature of imagination averts a significant obstacle to the contemplation of timeless truths, it is not the one that makes imagination the major linkage between perception and knowledge. In order to find the reason why imagination plays this role, let me, at least in general terms, articulate its differences from perception.

Both memory and imagination are essentially connected to perception, for they are both promoted by perception. Though they have many similarities, one must differentiate perception from imagination on two accounts.[41] First, imagination may take place even when its object is not present; for instance, in dreams we 'see' many images even if they do not exist at present;[42] perception is always of the present, however, and ceases when its object ceases.[43] Second,

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[41] *De An*. III, 3, 428a5–16.

[42] Apart from the passage cited, this is confirmed in *De An*. III, 2, 425b25; *OD* 1, 458b30; 459a16; *Met*. A, 9, 990b14; M, 4, 1079a11.

[43] Dorothea Frede (1992, pp. 282 ff.) insists that imagination continues with perception, actively serving as a synthesiser in the piecemeal perception of things. Schofield (1992, p. 258) affirms that one of the most important differences between imagination and perception is that the former involves some interpretation, and the latter does not. He denies that imagination is present in all sense perception, and divines that (1992, p. 260) 'men exercise *phantasia* precisely where sense-perception fails them'. Kenneth Turnbull, on the other hand, denies imagination is active (1994, p. 95) and he states both that imagination is a non-interpretative faculty and that it is the common sensation that is responsible for the unifying and interpretative role. Whether

we may experience false imagination whereas perception of proper objects is always true.[44]

Imagination is different not only from perception but also from thinking, since although they have imagination, animals other than man lack thinking.[45] Now, if there were no imagination, it would be impossible for us to think, which really amounts to saying that all human thinking depends on imagination.[46]

The possibility for imagination to serve as a bridge between perception and thought lies in its two-pronged structure. On the one hand, one may, as Aristotle himself did, connect imagination to the sensory faculty on the basis of its similarities with perception. I have, however, already observed the significant differences between perception and imagination. Given these differences, it would be perverse to read Aristotle as tacitly allowing that imagination has an identical structure to that of perception. On the other hand, Aristotle approximates imagination, as far as possible, to thinking. From this perspective, it is even possible to conceive of imagination as a type of thinking.[47] This will hardly do either, however, since I have also explained that it should be differentiated from thinking. Hence, according to Aristotle's conceptualisation, imagination has two aspects, one of which is connected to

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imagination is active or passive does not immediately relate to my presentation here since my chief purpose is to determine, in general terms, the role of imagination in the hierarchy of knowledge and to show how in reality Aristotle might claim that imagination can be regarded as the bond between what is perceptible and what is intelligible.

[44] *De An*. III, 3, 428a12–15. Cf. *Met*. Γ, 5, 1010b1–14. We may add another difference between imagination and perception if we want to apply a statement from a passage in which Aristotle differentiates opinion and imagination (*De An*. III, 3, 427b16): we can 'imagine' whenever we wish, whereas this is not possible for perception.

[45] *De An*. III, 10, 433a12; *EN* VII, 3, 1147b5.

[46] *De An*. I, 1, 403a8; III, 7, 431a17; 431b2; 8, 432a9; *De Mem*. 1, 450a1.

[47] See, for instance, *MA* 6, 700b17. One may be inclined to blame Aristotle for not establishing imagination as a unified faculty. Given the backdrop against which the role of imagination in the hierarchy of knowledge and Aristotle's epistemic motives in establishing hierarchy of knowledge develop, however, it is now plain that such suspicions may not necessarily be well founded. Besides, Aristotle himself is well aware of the fact that he conceptualises imagination in a two-pronged structure. Indeed, he explicitly divides imagination into two parts, and identifies the part, which appertains to perception as 'sensitive imagination' (φαντασία αἰσθητική) and the part, which belongs to thinking as 'deliberative imagination' (φαντασία λογιστική). This is confirmed most clearly in *De An*. III, 10, 433b29 and echoed in 434a5. Contrary to sensitive imagination, deliberative imagination is not found in all animals, but only the ones that are calculative (*De An*. III, 10, 433b29; 11, 434a6).

perception and the other to thinking. Since Aristotle's actual purpose is to establish the connection between what is perceptible and what is intelligible, I believe that Aristotle intentionally established imagination in such a two-pronged structure.

In *De Memoria*, Aristotle seems to be differentiating recollection (ἀνάμνησις) from memory.[48] When one recollects, what one does is to recover a perception that has previously been acquired.[49] I have previously noted that imagination depends on memory as memory establishes the grounds for imagination. Similarly, memory also promotes recollection by presenting its objects, i.e. images. Hence, when one recollects, one recovers the objects of memory.[50] Recollection, however, is fundamentally different from memory since, unlike memory, which belongs to perception, recollection belongs to the faculty of thinking.[51] Accordingly, although many animals have memory, only the animals that have the faculty of thinking, that is, only men, can recollect.[52] Since the activity of recollection is very similar to thinking, Aristotle even affirms that it is a mode of inference (συλλογισμός).[53] Recollection, therefore, can be regarded as the last constituent of the triple bond between perception and thinking. In this structure, memory is as approximate to perception as recollection is to thinking. Imagination, however, has two structures, one of which is connected to perception and the other to thinking. By virtue of this triple structure, we are almost ready for the universal knowledge of things.

1.1.3. Experience (Ἐμπειρία) and Art (Τέχνη)

Having mentioned memory Aristotle swiftly moves towards his aim that can be marked by the genuine knowledge of things in his establishment of the

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[48] Annas, however, does not believe that recollection is a separate faculty. See note 32.
[49] *De Mem*. 2, 451b2–5.
[50] *De Mem*. 2, 453a10–12. The role played by images in memory is quite different from their role in recollection; for this point, see Annas (1992, pp. 308–309).
[51] This is a very general statement of the difference between memory and recollection. For a more detailed discussion, see *De Mem*. 2.
[52] *HA* I, 1, 488b25.
[53] *De Mem*. 2, 453a9–14.

hierarchy of knowledge. The next step that comes after memory in the hierarchy of knowledge is experience (ἐμπειρία), which can be regarded as the bridge between memory and art (τέχνη):

> And from memory [ἐκ τῆς μνήμης] experience is produced [γίγνεται] in men; for many memories of the same thing [πολλαὶ μνῆμαι τοῦ αὐτοῦ πράγματος] produce finally the capacity [δύναμιν] for a single experience. Experience seems to be very similar [ὅμοιον] to science and art, but really science and art come to men *through* [διά] experience; for 'experience made art', as Polus says, 'but inexperience luck [τύχην]'. And art arises [γίγνεται], when from many notions [ἐννοημάτον] gained by experience one universal judgement [ὑπόληψις] about similar [ὁμοίων] objects is produced.[54]

When many memories of the same thing (πολλαὶ μνῆμαι τοῦ αὐτοῦ πράγματος) come together, experience is produced. This definition plainly approximates experience to memory as far as possible. In the first instance, one may even regard these two as the same thing;[55] however, we should not forget that experience is the bridge between memory and art and for this reason it should naturally have some affinities with not only memory but also art. Therefore, it would not be appropriate to identify experience solely with either of these faculties. Actually, the prima facie similarity between memory and experience is annihilated when one investigates the function of experience in the light of the whole Aristotelian corpus. There, one can plainly notice that many functions that are allocated to experience are lacking in memory. Indeed, experience plays a quite significant role in the functioning of Aristotelian science. It can function as the basic tool to filter the theories and distinguish the right theories from the ones that are erroneous.[56] Accordingly, experience plays a constructive role by supplying 'a comprehensive view of the admitted facts' and disciplines abstract discussions by virtue of repeated observations so that it becomes possible to build up more plausible theories.[57] Furthermore, experience helps us to find the proper principles of any particular science.[58] As a result, lack of experience will cause serious problems, not only in determining

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[54] *Met*. A, 1, 980b28–981a7.
[55] As Ross (1924, I, p. 116) claims: 'in principle it [experience] seems not to differ from memory'.
[56] Aristotle himself uses experience either to reject some of the theories that do not 'fit the facts' or to affirm some of them if they are 'confirmed by the phenomena' (μαρτυρεῖν φαινόμενα). This sense of experience, I believe, is quite close to what we call 'observation'. See *Cael*. I, 3, 270b4–20; 8, 290a13–18; *GC* I, 2, 316a5–14; *GA* III, 757b35–758a7.
[57] For this constructive role of experience, see: *An. Pr.* I, 30, 46a17–22; *GC* I, 2, 316a5–14; *LD* 7, 470b6–12; *GA* II, 6, 742a16–18; 8, 748a13–17.
[58] *An. Pr.* I, 30, 46a17; *GC* I, 2, 316a5–8.

the right theories or overall construction of a theory but also in preventing one from finding the proper principles of a science and therefore preventing the investigation from reaching coherent development. Since none of these features are appointed to memory, though Aristotle initially describes it as repeated memories, it seems upon reflection that experience has to be differentiated from memory.

In the same manner, experience differs from art as well. Though it is a significant step towards art, it differs from art in many respects. Before articulating these differences, let me explain a significant characteristic of experience that emerges from Aristotle's several discussions throughout his corpus, since this feature, as we shall see, is the basis of almost all the differences between experience and art. In many places in his corpus, Aristotle states that experience is concerned with particulars and connects it to the practices of life.[59] Hence, contrary to the universal knowledge of causes, the knowledge gained through experience is concerned more with particulars. Although experience, in this respect, has a considerable difference from art (art, as we shall see, is connected to universal knowledge of things), it plays a significant role in the attainment of art, since many experiences give rise to art by formulating some kind of 'universal judgement' (ὑπόληψις), which can be regarded as a general belief or opinion with a universal character.[60] Since it is primarily an opinion, it should be differentiated from scientific knowledge. Although scientific knowledge that is based on demonstration has a certain exactness, ὑπόληψις is open to mistakes and may even concern the things about which we cannot have any scientific knowledge.[61] Thus, the reliability of ὑπόληψις is relatively low when it is compared with scientific knowledge. Despite this deficiency, ὑπόληψις gives rise to the generation of art by unifying several experiences into a single universal judgement. Henceforth, men are alone in their epistemological journey towards higher knowledge, since animals

[59] See, for instance, *EN* III, 8, 1116b3–22; VI, 7, 1141b18; 8, 1142a16; *Pol*. I, 11, 1258b11.
[60] Some of the passages in which Aristotle uses ὑπόληψις as a general belief or opinion are thus: *An. Post*. I, 16, 79b27; *Top*. IV, 5, 126b15; *Meteor*. I, 8, 345b10; *DS* 1, 462b14–16; *Met*. A, 2, 982a6; 3, 983b22–25; 9, 990b23; K, 6, 1062b21; Λ, 8, 1073a17; M, 4, 1079a19; *Rhet*. III, 16, 1417b10.
[61] *De An*. III, 3, 427b17; 25; 28; *EN* VI, 3, 1139b17; VII, 2, 1145b36; 3, 1146b28; *Rhet*. III, 16, 1417b9.

other than men cannot reach this level of universality.[62] Accordingly, ὑπόληψις can be seen as the point of extremity, which no other animal's cognitive power can surpass.

By virtue of ὑπόληψις, then, experiences of particular instances are converted into the kind of universal knowledge, which characterizes art.[63] Again, the underlying differences between experience and art spring from the differences between particulars and universals. In order to understand the underlying reasons for the differences between art and experience, an examination, at least in general terms, of what Aristotle meant by art would be sufficient.

The genuine distinguishing marks of art, according to Aristotle, lie in its peculiar character, which is marked by its tendency to production. Accordingly, art can be regarded as the knowledge of production; a capacity to produce an external item.[64] Hence, all art is concerned with coming into being. Correspondingly, according to Aristotle, all things come into being from art or from nature or from spontaneity.[65]

In many places in his corpus, Aristotle states that art and πρᾶξις differ from each other in terms of their aims.[66] Whereas the ultimate aim of art is an external production, the aim of πρᾶξις is the action itself, which is not external to the agent. In this way, one may emphatically conclude that experience is more useful and suitable for πρᾶξις rather than art (ποίησις). This is because of the fact that both experience and actions are related more to particulars. Since it

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[62] Cf. *EN* VII, 3, 1147b5.

[63] It is interesting here to note Ritter's article, in which he examines science in Babylon. By examining several Babylonian texts, Ritter finds that the 'universal judgement' which is formed by an experiment of particular instances is lacking in Babylon: 'The Babylonian approach to the question of generalization is not, as with us, in the discovery and application of a "general rule" in which each case may be enveloped, but rather through interpolation in a pattern of known results' (Ritter (1995), p. 32). Though the reasons why Babylonians undertake such a 'science' may vary, it is clear that they lack ὑπόληψις as presented in Aristotelian texts. Thus, one may be inclined to think – given that 'science' in Egypt also lacks such a 'universal judgement' – that it is a Greek achievement to reach such a stage in science.

[64] Cf. *GA* II, 1, 735a2; 4, 740b28; *Met*. ϑ, 2, 1046b3; *EN* VI, 4, 1140a6–23; *MM* I, 34, 1197a12.

[65] *PA* I, 1, 640a28; *GA* III, 11, 762a16; *Met*. Z, 7, 1032a13; 9, 1034a9; 24; cf. *Met*. Z, 3, 1070a6.

[66] This is most clearly confirmed in *EN* I, 1, 1094a1–18; 7, 1097a16.

is the particular that is in force in actual life, experience, being the knowledge of particulars, suits the practices of life better. That is why Aristotle states:

> With a view to action [τὸ πράττειν] experience [ἐμπειρία] seems in no respect inferior to art [τέχνη], and we even see men of experience succeeding [ἐπιτυγχάνουσιν] more than those who have theory [λόγον] without experience. The reason is that experience is knowledge of individuals [καθ' ἕκαστον], art of universals [καθόλου][67]

We are told in this passage that, owing to his knowledge of particulars, a man of experience is more successful than an artist, i.e. craftsman in practical life. Perhaps more significantly, Aristotle implicitly admits that it is possible to have knowledge of the universal without having some experience of particular instances.[68] In other words, one may know the universal (e.g. the art of healing) without the associated experience (i.e. without actually healing [Socrates]). The one who knows the healing itself, the experience, is more successful in actual life, however, 'for it is the individual that is to be cured' (θεραπευτὸν γὰρ τὸ καθ' ἕκαστον).[69] Despite its superiority in practical life, Aristotle confidently affirms that 'we suppose artists to be wiser than men of experience.'[70]

Aristotle gives three underlying reasons for regarding art as superior to experience. Accordingly, we suppose artists to be wiser than men of experience firstly because, whereas artists know the cause, the men of experience do not.[71] Correspondingly, men of experience who know solely the fact (ὅτι) while not knowing the cause (διότι) perform their action habitually without knowing what they do;[72] on the other hand, artists who know the cause hinges on a reliable knowledge of things and act by virtue of this knowledge.[73] The knowledge of the cause, therefore, deservedly puts the artist in a superior

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[67] *Met.* A, 1, 981a13–16.
[68] This is also explicitly confirmed in *An. Post.* I, 13, 79a5.
[69] *Met.* A, 1, 981a23–24.
[70] *Met.* A, 1, 981a24–25.
[71] According to Aristotle's conception of science, the gap between knowing the fact (ὅτι) and knowing the cause (διότι) is as wide as the difference between mere knowledge and the scientific knowledge of things (see, *An. Post.* I, 13).
[72] *Met.* A, 1, 981a26.
[73] Certainly, the fact that artists rely upon a more credible knowledge than men of experience does not mean that their knowledge is always true. This is not what Aristotle wants to suggest here.

position to men of experience. Thus, the knowledge of causes can be regarded as the most reliable criterion thanks to which we can determine the status of any kind of knowledge. Accordingly, the degree of a particular knowledge can be determined by the degree of the causes that the knowledge in question concerns. Men of experience, however, do not even know the cause and consequently they should be placed at the lowest possible level in the hierarchy of knowledge. This is doubly confirmed if we take into account the status of the perceptual knowledge of things to which the knowledge of the experienced is connected. While men of experience solely possess knowledge coming from perception and from individuals, which places them at the bottom of the hierarchy, artists have the knowledge of causes and universals.

The second reason for regarding artists as superior to men of experience relies upon the ability to teach (δύνασθαι διδάσκειν) the knowledge that one enjoys.[74] According to this conception, since artists can teach (διδάσκειν) what they know, and since men of experience cannot, we should regard the former as wiser than the latter. The ability to teach, as we shall see in the second chapter of Book A, is regarded as a significant characteristic of a wise man and this initial difference between men of experience and artists evokes that discussion.[75] When considering that passage, we come to understand that this feature of art is connected to the first that I mentioned hitherto since the one who knows the causes can teach because 'the people who teach are those who tell the causes of each thing [τὰς αἰτίας λέγοντες περὶ ἑκάστου]'.[76] Men of experience, however, do not know the causes and, for this reason, they cannot teach. Since we regard those who can teach as wiser than those who cannot teach, we regard artists as wiser than men of experience.

I have already implied the third reason why one should regard experience as inferior to art. Experience is connected to the senses, and the senses, as I have previously noted, are connected to particulars. Though the senses give us quite

[74] *Met*. A, 1, 981b6.
[75] See *Met*. A, 2, 982a13; 982a27.
[76] *Met*. A, 2, 982a29–30.

an accurate knowledge of particulars, 'they do not tell us the "why" of anything [οὐ λέγουσι τὸ διὰ τί περὶ οὐδενός]'.[77] This implies that Aristotle envisages a connection between the cause and the universal. The perceptual knowledge of individuals, on the other hand, is excluded from this connection. Hence, senses connected to individuals give us the fact without the cause that is still connected to universals. That is why experience should be regarded as inferior to art for, since whereas the former is linked to individuals, the latter concerns universals associated with the causal knowledge of things. These three reasons, therefore, make us think that art is superior to experience even though the latter is apparently superior in practical life.

But what are the basic motives that lead Aristotle to invoke such a discussion? What is the point that he is trying to make by virtue of presenting such a hierarchy of knowledge? There is no doubt that any answer to such questions should draw our attention in one way or another to the importance that Aristotle gives to the determining of the precise place of Wisdom[78] in the hierarchy of knowledge. Before committing to a fuller discussion of the subject, Aristotle points out the exact place of Wisdom and forestalls anyone who might have a tendency to confuse it with the kind of science that Aristotle will envisage in the later discussions of the treatise. Hence, the steps in the hierarchy of knowledge are not investigated for their own sake but rather for that of the terminus, i.e. Wisdom. By virtue of this introduction, Aristotle derives the basic concepts that he frequently uses in the latter parts of the discussion and

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[77] *Met*. A, 1, 981b12.

[78] It is appropriate to note at this point that Aristotle uses Wisdom (σοφία) in two different ways in *Metaphysics*. In a group of passages (*Met*. A, 1, 981a27; Γ, 3, 1005b1; K, 4, 1061b32), it generally means science and philosophy. Wisdom, in this sense, corresponds to the totality of theoretical sciences: 'both natural science and mathematics must be regarded as *parts* of Wisdom' (*Met*. K, 4, 1061b32). On the other hand, Wisdom is used in another sense, signifying the science of the first principles. This can be regarded as the term's proper usage (ἁπλῶς σοφίαν. See Alexandros, 8, 2) and occurs more often in *Metaphysics* (*Met*. A, 2, 982a5; α, 1, 995b12; 2, 996b9; K, 1, 1059a18–32; 2, 1060a10; Λ, 10, 1075b20). Since it is directed towards the first principles, it constitutes the highest activity and state of the human mind (see *MM* I, 34, 1197a15). For this reason, as Bonitz states, it is not necessary to use the adjective 'πρώτη' (first) with it (*Index Aristotelicus*, 688b55). The first chapter of Book A involves exactly this sense of Wisdom. It is this chapter that proves the superiority of Wisdom to other types of knowledge. If the superiority of any science depends on its knowledge about causes, Wisdom should be the highest of all simply because it deals with the highest principles (πρώται αἰτίαι).

determines their precise status with respect to the main subject of his discourse, i.e. Wisdom.

What we can safely extract from this first part of *Metaphysics* is that human knowledge has some major components, perception, memory and imagination, experience, art, science and Wisdom, and Wisdom is the highest amongst them. A higher level in this hierarchy is differentiated from a lower level on the basis of knowledge of causes; the more you know the causes the higher level you are on the hierarchy of knowledge. Accordingly, Wisdom, by virtue of being the highest possible level in the hierarchy, should be regarded as the science of the ultimate principles.[79]

The hierarchy of knowledge gives some hints, which are quite significant in terms of the aims of this thesis. I believe that Aristotle's presentation of the hierarchy of knowledge and the basic message of this discussion that comes just at the end of the chapter, in which Aristotle plainly observes that Wisdom is the science of highest principles and causes, tells us something about the theological aspect of Wisdom. In order to shed light on what all these discussions tell us about the theological aspect of Wisdom, one might recall one of Aristotle's most famous epistemological distinctions: the distinction between what is knowable to us (πρὸς ἡμᾶς) and what is knowable in nature (φύσει) and in itself (καθ' αὐτό).[80] According to this distinction, whereas some things are more knowable to us, others are more knowable in nature. Whereas in the order of knowing what is knowable to us comes before what is knowable by nature and in itself, the latter is always prior in another way and superior to the former. It is, then, natural for us to advance from what is more obscure by nature, but clearer to us, towards what is clearer to and more knowable by

[79] It is important to note that, in this section, Aristotle does *not* prove that Wisdom deals with *first* principles and causes. This will be shown in the next section. The fact that Wisdom deals with primary causes and principles is only stated as a common opinion: 'all men suppose (ὑπολαμβάνουσι) what is called Wisdom to deal with the first causes (τὰ πρῶτα αἴτια) and the principles (ἀρχάς) of things' (*Met*. A, 1, 981b28).

[80] For some of the passages in which Aristotle presents this distinction, see: *An. Pr*. II, 23, 68b35; *An. Post*. I, 2, 72a3; *Top*. VI, 4, 141b4; 141b25; *Phys*. I, 1, 184a16–21; 5, 188b32–189a5; II, 1, 193a5; *Met*. Z, 3, 1029b8; *EN* I, 4, 1095b2–3; 7, 1098b3–8.

nature. Now, the hierarchy of knowledge of Book A that I have been discussing squares well with this distinction because it starts with what is perceptible, that is, more knowable to us, and proceeds to higher kinds of knowledge – the knowledge of the causes – that is, knowable in nature. In this way, Wisdom, which stands at the highest point of this hierarchy, corresponds to what is knowable in nature and in itself.

We could proceed now by further articulating the distinguishing characteristics of what is knowable by us and what is knowable in nature, by way of which we might reasonably attain a better articulation of what Wisdom is supposed to be dealing with. A passage from *Posterior Analytics* may be employed to shed light on the characteristics of Aristotle's epistemological distinction:

> Things are prior (πρότερα) and more knowable (γνωριμώτερα)[81] in two ways; for it is not the same to be prior by nature (πρότερον τῇ φύσει) and prior in relation to us (πρὸς ἡμᾶς πρότερον), nor to be more knowable (γνωριμώτερον) and more knowable to us (ἡμῖν γνωριμώτερον). I call prior and more knowable in relation to us what is nearer to perception (ἐγγύτερον τῆς αἰσθήσεως), prior and more knowable *simpliciter* (ἁπλῶς) what is further away (πορρώτερον). What is most universal (καθόλου μάλιστα) is furthest away (πορρωτάτω), and the particulars (καθ' ἕκαστα) are nearest (ἐγγυτάτω); and these are opposite (ἀντίκειται) to each other.[82]

With respect to what is knowable to us and what is knowable in nature, one might accordingly postulate two main characteristics. What is knowable in nature and in itself should be (1) further away from perception (πορρώτερον τῆς αἰσθήσεως) and (2) universal (καθόλου); conversely, what is more knowable to us should be (1) nearer to perception (ἐγγύτερον τῆς αἰσθήσεως) and (2) particular (καθ' ἕκαστον). If we simply apply these findings to Wisdom, we may easily conclude that Wisdom is the knowledge that is (1) concerned with thing(s) furthest away from perception and (2) universal.

This view squares very well with the hierarchy of knowledge that originates from perceptual knowledge of the particulars that can be correlated with what is knowable by us. As we move towards the upper end of the hierarchy, gradually we move further away from senses and therefore move towards

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[81] γνωριμώτερα may well be rendered as 'more knowable' (rather than 'more familiar') and I have slightly modified the translation accordingly. See *Top*. VI, 4, 141b29–34.
[82] *An. Post*. I, 2, 71b33-72a5.

things that are knowable in nature. Accordingly, the summit of the hierarchy can be correlated with things that are furthest away from senses and knowable in nature. This is exactly the point at which Wisdom stands. Correspondingly, the subject matter of this science is marked by things or a thing furthest away from perception.

One might indeed find connections with what Aristotle states with respect to hierarchy of knowledge and what Plato maintains, since they both identify the genuine knowledge of things with what is universal in contrast to the knowledge of particulars. The distinction between what is knowable by us and what is knowable in nature squares well with the hierarchy of knowledge; however, there are clues that Aristotle is pointing to another distinction, which is unquestionably Aristotelian, namely, the form and matter distinction. After all, one could make some sense of the distinction between what is knowable by us and what is knowable in nature by virtue of correlating it with the hylomorphic analysis. When asked what are the things that are more knowable in nature, one is inevitably directed towards the very nature of the things in question. If this nature consists of form then it means that the thing is less perceptible.[83] The more formal it is, the less perceptual it is and therefore further away from the perceptions. Such a thing would be knowable in nature. On the other hand, the more material it is, the more perceptual and nearer to senses it is. Such a thing would be more knowable by us whereas it would be less knowable in nature.

If we consider the whole doctrine that Aristotle espouses in his *Metaphysics*, we can reasonably contend that God is to be counted as the thing that is furthest away from perception because God has no material parts at all.[84] This squares well also with the statement that Wisdom is the science of causes and principles, as God should be regarded as one of the causes.[85] This shows us that the distinction what is knowable by us and what is knowable in nature is

[83] I deal with this point in more detail in Chapter IV.
[84] *Met*. Λ, 6, 1071b21. I reflect on the formal nature of God in chapter V, where I discuss Book Λ.
[85] See *Met*. A, 2, 982b10. More details on this subject will be given in Chapter V.

compatible with conceptualising Wisdom as theological. This, as I have mentioned, squares perfectly well with God, who, among the other things in the Universe, can be regarded as the most knowable in nature.

We may add, however, that although this epistemological distinction between what is knowable by us and what is knowable in nature shows that Wisdom is conceptualised as a theological science it *also* represents an understanding that is absolutely in line with what is maintained in the later stages of Aristotle's analysis, namely the hylomorphic analysis that stands at the heart of Aristotle's mature doctrine of Being. This suggests that the theological angle of what Aristotle maintains in the first section of Book A is not necessarily motivated by his Platonic stance as it seems to be in line with what he later establishes as his own doctrine. The distinction between what is knowable by us and what is knowable in nature squares perfectly on the one hand with the hierarchy of knowledge established in Book A and on the other hand with the hylomorphic analysis presented in later stages of *Metaphysics*. Hence, the way in which Book A is theological does not necessarily depend on its being an early work or Platonic but may well depend on unquestionably Aristotelian positions that will be brought to the fore in later stages of *Metaphysics*.

The second criterion of being knowable in nature, namely, the criterion of universality, however, is not at all as immediately and plainly connected to God as the first criterion. How Wisdom will turn out to be a universal study of Being cannot ultimately be understood without the developments that we encounter in Book Γ. There, we will see that Aristotle is mostly concerned to fulfil this requirement of universality as he establishes a special kind of relation between the instances of Being whereby he can establish the grounds for a universal science of Being. Accordingly, I leave this discussion to the next chapter, where I discuss Book Γ. Leaving the justification to the later stages of my analysis and appealing to the reader's tolerance, let me state my view that the universality feature is in no way contradictory to the theological outlook of Wisdom; on the contrary, as we shall see throughout the course of this thesis, these two

elements go hand in hand. We at least know for certain that what is more universal in the hierarchy of knowledge corresponds to what is higher in terms of causes. The higher the cause, the more universal it is, as we have already seen in Aristotle's discussion of the hierarchy of knowledge, and God can be regarded as the highest of all principles.

These considerations show that the hierarchy of knowledge we encounter in the first chapter of Book A makes no sense without the terminus to which it is eminently directed and which, as has been shown, can be correlated with God. Now one might reasonably subscribe to the view that not every hierarchy requires a terminus but the hierarchy of knowledge, precisely because it is genuinely a hierarchy of causes, requires a terminus. The explanatory chains cannot go on *ad infinitum*, in which case we do not have a genuine explanation. The highest cause in a way covers all the subordinating causes. Wisdom, according to what we are informed in the first section of Book A, studies precisely this highest cause, which in turn may well be correlated with God. Hence, Aristotle's establishment of the hierarchy of knowledge is not without purpose and is intended to determine the precise place of Wisdom in the epistemological hierarchy by virtue of determining its most fundamental subject matter. This amounts to saying that the basic reason why this hierarchy is established in the way it is may well be to emphasise the dominant role of the highest cause, namely, God, in Wisdom. I believe this outcome is further confirmed in the second section of Book A, which will enable me to present more satisfactory evidence for my hypothesis.

1.2. The Characteristics of Wisdom

In the second chapter of Book A, Aristotle takes a major step towards establishing the subject matter of Wisdom by declaring that it is the highest principles and causes of things that denote the basic inquiry of this science.[86] In

[86] *Met*. A, 1, 981b27–29: 'οὗ δ' ἕνεκα νῦν ποιούμεθα τὸν λόγον τοῦτ' ἐστίν, ὅτι τὴν ὀνομαζομένην σοφίαν περὶ τὰ πρῶτα αἴτια καὶ τὰς ἀρχὰς ὑπολαμβάνουσι πάντες'.

a dialectical manner he also seeks to determine the main characteristics of Wisdom by taking the lead from common opinions (ὑπόληψις) shared by almost everyone with respect to the wise man. The question that which interests me most in this part concerns these characteristics of Wisdom. What, indeed, do they tell us, if anything, about the theological aspect of Wisdom and if they do tell us something with respect to the theological character of Wisdom, might we conclude that this theological stance is in line with unquestionably Aristotelian doctrines that one might encounter in later stages of *Metaphysics*? In this section I will conduct a discussion concerning the characteristics of Wisdom with the aim of clarifying how far these characteristics show that Wisdom is a theological science and as far as this is possible, present an assessment of to what degree this theological stance is in line with what Aristotle later maintains in the other treatises of *Metaphysics*.

1.2.1. Wisdom: The Universal Science

At the beginning of the second section of Book A, when Aristotle proceeds to inquire into the kinds of causes and principles with which Wisdom is supposed to deal, he has already succeeded in showing that (1) knowing by causes is superior to all other types of knowledge and (2) one who knows the universal though he does not know the particular is superior to one whose knowledge is limited to the particular. In the second section of Book A, Aristotle aims to find out what kind of causes and principles Wisdom is seeking. He follows a dialectical path by way of which he derives the characteristics of Wisdom. Some of these characteristics seem to be more important than others, especially those that determine directly the scope of Wisdom as a *universal* science. The emphasis on the universality of Wisdom is unavoidable for at least two reasons. First, the universal character of Wisdom is an essential feature by means of which one can understand Aristotle's conception of his later determination of the science of Being. Second, it is this universality feature of Wisdom that produces many of the disagreements among scholars about the conception of the science of Being. After all, one could plausibly claim that in setting out such

a characteristic of Wisdom Aristotle intends to introduce a general metaphysics, a non-theological science, in which all substances are studied one way or another, and which will be developed in the later stages of his investigation, especially in Book Γ. The question of how far this universality should be carried, and what Aristotle's actual intentions in establishing this feature of Wisdom is, are therefore extremely significant. These questions and correlated ones cannot, however, be ultimately resolved at the level of Book A, where Aristotle seems to be providing a general introduction to what he will later call 'First Philosophy', without engaging in detail in doctrinal questions on the scope of the science in question.

Enumerating the characteristics of the wise man, Aristotle initially observes, 'We suppose (ὑπολαμβάνομεν) first, then, that the wise man knows (ἐπίστασθαι) all things (πάντα), as far as possible, although he has no knowledge of each of them individually (μὴ καθ' ἕκαστον ἔχοντα ἐπιστήμην αὐτῶν)'.[87] Since we call wise the one who has Wisdom, Wisdom should be the science that deals with 'all things as far as possible'. This, at least in the first instance, is rather confusing, as no science can investigate all parts of Being. If it were so, then the other sciences would dissolve into a single gigantic science of Being, which would study all things that *are*.[88] This puzzle, as we shall see in the next chapter, is what motivates Aristotle later in Book Γ to introduce a special kind of relation in the instances of Being, namely, core-dependent homonymy (CDH) (πρὸς ἕν), without which the scope of the universality of Wisdom cannot easily be decided. Yet I think there is evidence in Book A which clarifies the content of the phrase 'all things as far as possible' if, especially, we take into consideration the first section of Book A that I have already discussed, where Aristotle presents a hierarchy of knowledge which begins with perceptual knowledge of the particular and ends with the universal knowledge of causes. While presenting this hierarchy, Aristotle hinted that it is possible to

[87] *Met*. A, 2, 982a8.
[88] This is very like the conclusion at which Plato arrives. I will reflect on this point in the next chapter.

have universal knowledge without having knowledge of the particular.[89] This is especially reflected in Aristotle's comparison between men of experience and an artist, as he states that the latter is superior to the former on the basis of the fact that the artist knows the universal (καθόλου) but men of experience do not. I suggest that it is this line of thought, in which the superiority of the universal knowledge over the knowledge of the individuals is emphasised, that continues when Aristotle claims that Wisdom deals with 'all things as far as possible'. Read in this light, the statement affirms a previously stated fact that one who knows the universal is superior and should be called *wiser* (σοφωτέρους) than one who lacks such knowledge (e.g. a man of experience whose knowledge is limited to particular instances).[90] The wise man, accordingly, knows the most universal knowledge though he does not know all the individual cases. Some lines below this Aristotle explicitly states:

> Now of these characteristics that of knowing all things [τὸ μὲν πάντα ἐπίστασθαι] must belong to him who has in the highest degree universal knowledge [τῷ μάλιστα ἔχοντι τὴν καθόλου ἐπιστημην]; for he knows in a sense all the subordinate objects [πάντα τὰ ὑποκείμενα].[91]

If we combine this passage with the previous discussion in the first section of Book A, we can obtain some understanding of the phrase 'all things as far as possible', i.e. that which is supposed to be known by the wise man. No doubt this phrase corresponds to the 'universal knowledge of the causes of things that *are*'. This follows from what we have been told in the first section of Book A, namely that the level of universality goes hand in hand with the knowledge of causes. As a man gets to know the causes of things, what he attains is some kind of universal knowledge; the higher his knowledge of causes, the higher the level of the universality of his knowledge. That is why artists are wiser than men of experience; in contrast to the latter, the former know the causes and principles of things.[92] The parallelism between the universal knowledge of things and the knowledge of causes helps Aristotle to attain a clear result with respect to the subject of Wisdom. Since Wisdom is to be regarded as the most

[89] *Met*. A, 1, 981a13–16. This is explicitly confirmed in *An. Post*. I, 13, 79a5 as well.
[90] *Met*. A, 1, 981a24–5: 'We suppose artists to be wiser [σοφωτέρους] than men of experience'.
[91] *Met*. A, 2, 982a21-23.
[92] *Met*. A, 1, 981a26.

universal knowledge, it must deal with the highest causes and principles. Therefore, by virtue of being the most universal knowledge of things, Wisdom should study the highest causes and principles of things, which in turn, will cover the knowledge of subordinating causes. This will allow Wisdom to be regarded as the knowledge of all things as far as possible.

What, then, can be said about the relation between universality and the theological conception of Wisdom?

It would not conflict with Aristotle's general doctrine to suppose God to be one of the principles, since Aristotle himself explicitly states as early as this first book of *Metaphysics* that God should be regarded as one of the causes.[93] Not only is He to be considered a principle, but He should also, as Aristotle explicitly observes, be regarded as the first principle among the causes of all things (ὁ τε γὰρ θεὸς δοκεῖ τῶν αἰτίων πᾶσῖν εἶναι καὶ ἀρχή τις). The justification for how God should be regarded as a first principle is far beyond the aims of the first book of *Metaphysics*; for only through clarifying the nature of God can one satisfactorily explain God's being the first principle of things.[94]

The fact that God should indeed be among the first causes is, however, doubly established in this first book, since Aristotle not only divines that He is the first cause among others but also explicitly states that God is the subject of Wisdom.[95] If this is the case, that is, if God is the subject of Wisdom, then even though we do not have explicit justification based on the nature of God, we may conclude that God is one of the highest principles of all things, since amongst the range of all sciences only Wisdom undertakes the responsibility of studying the highest principles and causes. Although it is beyond Aristotle's aims in Book A to justify how the universality of Wisdom can be attained through God, one can infer from all that has been claimed that the study of God is a universal study based on the idea that God is among the principles and

[93] *Met*. A, 2, 983a8.
[94] I will accordingly deal with this issue in chapter V.
[95] *Met*. A, 2, 983a5–10.

should be regarded as the highest principle, knowledge of whom will be the most universal, because in studying the highest principles one has to study all the subordinating principles as well.

1.2.2. Wisdom: The Science of the Most Difficult Things

Having stated that Wisdom should be regarded as the most universal science, Aristotle continues to enumerate the characteristics of this science by stating that the wise man knows things that are difficult and Wisdom is the science of the most difficult things:

> Secondly, that he who can learn [γνῶναι] things that are difficult [τὰ χαλεπὰ], and not easy [μὴ ῥᾴδια] for man to know [γιγνώσκειν], is wise [σοφόν] (sense perception [αἰσθάνεσθαι] is common to all [πάντων κοινόν], and therefore easy [ῥᾴδιον] and no mark of wisdom)[96]

Aristotle himself explains what he means by 'things that are difficult to learn' a little further by stating 'And these things, the most universal [τὰ μάλιστα καθόλου], are on the whole the hardest [χαλεπώτατα] for men to know [γνωρίζειν]; for they are furthest [πορρωτάτω] from the senses [τῶν αἰσθησεών].'[97] In order to understand the scheme Aristotle has in mind here, it is helpful to recall the hierarchy of knowledge revealed in the first chapter of Book A. There, the hierarchy starts with the perceptual knowledge of the particular. This is the first step in the hierarchy, representing the things that are 'more knowable to us'. What Aristotle explicitly refers to by saying 'sense perception is common to all, and therefore easy and no mark of Wisdom' is this first step in the hierarchy. The ability to perceive is a common attribute of all animals,[98] which differentiates animals from plants,[99] and as we have seen in the first chapter, perception is linked to particulars.[100] Since perception is common to all animals and is linked to the things that are 'more knowable to

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[96] *Met*. A, 2, 982a10–12.
[97] *Met*. A, 2, 982a24-25.
[98] *De An*. II, 2, 413b9; III, 9, 432a16; *SS* 1, 436a8; b9.
[99] *An. Post*. II, 19, 99b35; *De An*. II, 2, 413b4; III, 13, 435b20; *SS* 1, 436b11; *PA* II, 1, 647a21; 10, 656a3; III, 4, 666a34; *GA* I, 23, 731a33; III, 7, 757b16; V, 1, 778b32; *EN* IX, 9, 1170a16.
[100] See, also, *An. Post*. I, 18, 81b6; 24, 86a29; 31, 87b29; *Phys*. I, 5, 189a6; *De An*. II, 5, 417b22–8; *Met*. B, 4, 999b3; Δ, 11, 1018b32; *EN* VI, 8, 1142a27.

us' rather than those that are 'more knowable in nature', this kind of knowledge cannot be regarded as Wisdom, which is still regarded as the highest knowledge that a man can attain. All animals can achieve some knowledge concerning particulars and all men can effortlessly learn things commonly knowable by animals, that is, the perceptual knowledge of particulars. What we seek, however, is a unique kind of knowledge, a type of knowledge so hard to attain that only a very limited number of animals can possess it. In terms of the same hierarchy, this kind of knowledge should evidently signify the opposite pole. This is confirmed by Aristotle's statement that the most universal things and those furthest away from perception are the hardest to attain. These are the things that are 'knowable in nature'. The wise man is the one who attains such knowledge; his knowledge is not limited to the things that are 'knowable to us', that is, the perceptual knowledge of the particular, but spreads to the 'things that are knowable in nature', that is, the universal knowledge of the causes and principles of things. Accordingly, Wisdom is the science of the things that are hardest to reach and these are the things that are most universal (τὰ μάλιστα καθόλου) and furthest away from perception (πορρωτάτω τῶν αἰσθησεών).

What can be said with respect to the implication of this characteristic for the theological interpretation of Wisdom? To what degree does the subject of Wisdom, determined by virtue of this characteristic as the science of the most difficult things, fit the theological interpretation of Wisdom?

We might affirm at the outset that this characteristic of Wisdom not only suits but also requires that it be a theological science if there is any place of God in the Aristotelian doctrine at all. Since studying the most difficult things, as I have stated, means nothing except investigating things that are knowable in nature, which corresponds to things that are furthest away from perception and since in accordance with Aristotle's general doctrine, it is perfectly apt to regard God as pure actuality, having no material part, God should well be what is

meant as Aristotle phrases what is 'furthest away from perceptible things'.[101] For this very same reason, that is, because God is conceived as pure actuality and form, and if we are to accept matter as a principle of indeterminacy, He should be regarded as most knowable in nature. If, then, Wisdom is the science of the things that are most difficult to learn, God should be its precise subject matter since only in this way can the content of 'things difficult to learn' be satisfactorily understood. Wisdom, in this context, is palpably envisaged as a theological science.

1.2.3. Wisdom: The Most Exact Science

Aristotle stated that the third characteristic of Wisdom is exactness; he who is more exact (ἀκριβής) deserves to be called wise; correspondingly, Wisdom enjoys the merit of exactness more than any other science.

But what is the criterion by which we call a science more exact? Aristotle gives explicit clues throughout his corpus. Following these clues one can safely argue that the exactness of a science depends on its subject matter. It is not the method or the approach that can make a science more exact but rather the object of enquiry that is capable of determining the level of exactness that a science enjoys. Aristotle himself states the conditions for an exact science in Book Λ of *Metaphysics*:

> And in proportion as we are dealing with things which are prior in formula [περὶ προτέρων τῷ λόγῳ] and simpler [ἁπλουστέρων], our knowledge will have more accuracy [μᾶλλον ἔχει τὸ ἀκριβές], i.e. simplicity [τὸ ἁπλοῦν]. Thus a science which abstracts from the magnitude [ἄνευ τε μεγέθους] of things is more precise than one which takes it into account; and a science is most precise if it abstracts from movement [ἄνευ κινήσεως], but if it takes into account movement, it is most precise if it deals with the primary movement [πρώτην], for this is the simplest [ἁπλουστάτη]; and of this again uniform movement [ἡ ὁμαλή] is the simplest form.[102]

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[101] For Aristotle's proof concerning the formal nature of Immobile Substance see *Met*. Λ, 6, 1071b12–22 as well as the whole of the seventh part of Book Λ, where Aristotle investigates divine nature. I will discuss this characteristic of God in the fifth chapter.
[102] *Met*. Λ, 3, 1078a9-13.

Although several interrelated conditions for the exactness of a science are stated in this passage, it is possible to reduce them to a single condition: a science is more exact if it deals with things whose formal elements are more separable from their material elements. In other words, as the formal object of a science becomes purer, the level of exactness that it enjoys becomes higher. For instance, physics deals with things that are naturally connected to matter. What is meant by 'naturally' is that it is almost impossible to separate the formal element of the objects of physics from their material parts since the essence of things that are dealt with by physics is always related to matter (ἀεὶ ἔχει ὕλην).[103] In other words, the essences of animals, plants and suchlike involve a necessary connection with a certain kind of matter,[104] preventing physics from being the most exact science amongst others. In contrast, mathematical sciences are the most exact amongst others,[105] since before conducting his enquiry the mathematician applies some kind of abstraction by virtue of which he filters the material elements from his object of enquiry.[106] Since material parts that constitute the principle of change and indeterminacy in the object of enquiry are filtered through a kind of abstraction, mathematical sciences deserve to be called more exact than the other sciences. It is not wise to expect a science other than mathematics to have this minute accuracy as no other science can abstract the material parts from their object of enquiry as much as mathematics.[107]

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[103] Cf. *Met*. E, 1, 1026a3. I will discuss this issue in detail in ch. III.

[104] In the present discussion, I do not want to inquire into the details of Aristotle's theory of definition since this is beyond the aims of this part of my essay. To clarify what I mean by 'a necessary connection to a matter, I would like to recall the example of a 'snub nose' (τὸ σιμόν: see *Met*. E, 1, 1025b31; Z, 5, 1030b15–26), where 'snubness' (σιμότης) can be defined as 'concavity in the nose'. Here, 'concavity' (ἡ κοιλότης) corresponds to the formal element without perceptible matter (ἄνευ ὕλης αἰσθητῆς) and 'nose' (ῥίς) to the material element (as it is always made of flesh and bone). Now, roughly, a science which deals with a physical form such as 'snubness' should deal to a certain degree with some material element, as 'snubness' has a necessary connection to the material element reflected in its definition. Since physics deals with the things that have such reference to matter, it cannot have the highest level of exactness.

[105] *Cael*. III, 7, 306a27.

[106] I will discuss the details of this argument in ch. III.

[107] *Met*. α, 3, 995a14-17: 'The minute accuracy of mathematics [ἀκριβολογίαν τὴν μαθηματικήν] is not to be demanded in all cases, but only in the case of things which have no matter [μὴ ἔχουσιν ὕλην]. Therefore its method is not that of natural science, for presumably all nature [ἡ φύσις] has matter.' See also *EN*, I, 3, 1094b24; II, 2, 1104a2.

It is, however, possible for a science to be even more exact than mathematics. Let us consider a science that has subject matter without any material parts at all. Such a science does not need to abstract the material parts from its object of enquiry as its subject matter already consists purely of the formal elements. Indeed, there exists such a science, which we call Wisdom and which is explicitly stated to be the most exact amongst other sciences.[108] Certainly, these observations tell us something about the theological aspect of Wisdom and I will deal with this subject after examining the other condition for the exactness of a science that is stated in the first book of *Metaphysics* and in other parts of the Aristotelian corpus.

A science is more exact if it deals with fewer principles:

> And the most exact [ἀκπιβέσταται] of the sciences [τῶν ἐπιστημῶν] are those which deal most with first principles [αἳ μάλιστα τῶν πρώτων εἰσίν]; for those which involve fewer principles are more exact than those which involve additional principles, e.g. arithmetic than geometry.[109]

We are told above that a science should deal with fewer (ἐξ ἐλαττόνων) principles if it is to be more exact (ἀκριβέστερα). This may seem confusing in the first instance but even a rough enquiry into the structure of Aristotelian science will explain why Aristotle stated such a condition for the exactness of a science. According to Aristotle, every science relies on principles. These are the basic propositions (e.g. definitions) that a science *assumes*. These basic propositions cannot be known through demonstration, that is, they are immediately true, uncaused and necessary. Starting from such principles, every science builds up demonstrative syllogisms that can be regarded as the main body of that science. Through these demonstrative syllogisms that rely upon basic principles it is possible to attain non-basic or derived truths. These non-basic or derived truths may in turn be employed by a subordinating science as its own principles. In other words, the non-basic principles derived from the basic principles of a superior science may work as the principles of a subordinating science. Hence, the subordinating science adds the principles of

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[108] *Met*. A, 2, 982a25.
[109] *Met*. A, 2, 982a25-28. See also *An. Post*. I, 27, 87a34.

the superior science to its own non-basic, derived principles. This cumulative addition of principles establishes the main body of hierarchies of sciences under which different sciences operate. As we move towards the end of the hierarchy, we face more principles since as I have mentioned, the subordinating sciences cumulatively add the principles of superior sciences to their proper principles. This is exactly what happens in the example of arithmetic and geometry. Geometry should be regarded as less exact than arithmetic, as while arithmetic works only with principles of numbers, geometry cumulatively adds the principles of numbers to its own proper principles, namely, the principles of space. It is in this sense that arithmetic is closer to basic principles and derives its truths from superior, more basic, principles than geometry. Geometry, in turn, adds the principles of numbers to the principles of space and builds up its own demonstrations from these principles. Consequently, it works with principles that are further away from basic principles and that are secondary in the sense that they are caused by other principles (i.e. the principles of numbers) dealt with by another, superior, science (i.e. arithmetic). That is why the level of exactness of geometry cannot be as much as that of arithmetic.

It is, however, possible for a science to be even more exact than arithmetic and similar sciences. For consider the following: the upshot of my discussion is that the exactness of a science depends on two conditions: first, a science is exact if it deals with things that can be abstracted from their material parts and can be regarded as more exact if it deals with things that do not involve any material parts at all so that no abstraction is needed; second, a science is more exact if it deals with fewer principles. Now, these conditions are met by Wisdom more than any other science and they in turn show precisely how Aristotle perceives Wisdom as a theological science simply because, among things, only God has no material part at all and can be regarded as the ultimate principle of all Being.[110] Wisdom, indeed, is more exact than both physics, whose subject matter consists of things inseparable from matter, and mathematics, in which some abstraction should be applied before any investigation proceeds. This

[110] *Met*. A, 2, 983a8.

characteristic of Wisdom as the most exact science, then, shows that it is perceived as a theological science.

The characteristic of exactness, as we have seen, is in line with the hylomorphic analysis that Aristotle articulates in the other treatises of *Metaphysics*. As I have mentioned, hylomorphic analysis stands at the heart of Aristotle's doctrine and the criterion of exactness, which is developed alongside this doctrine, seems to be genuinely Aristotelian as well. If the exactness of Wisdom implies that it is eminently a theological science and if exactness develops alongside unquestionably Aristotelian doctrines such as hylomorphic analysis, why not accept that the theological appearance of Wisdom in Book A depends on internal factors that are unquestionably Aristotelian rather than some external factor such as the influence of Plato on Aristotle?

Additionally, the conception of science against which the criterion of exactness is measured here is also genuinely Aristotelian. The claim that a science becomes more exact if it deals with fewer principles can be regarded as being in perfect harmony with Aristotle's general doctrine of science. Hence, these are the two conditions that constitute the backdrop against which the discussion of the exactness of a science develops and they are conditions that Aristotle has no trouble accepting at any level of his philosophical development.

1.2.4. Wisdom: The Most Teachable Science (δύνασθαι διδάσκειν)

In the second chapter of Book A Aristotle claims that he who is 'more capable of teaching [διδασκαλικώτερον] the causes [τῶν αἰτιῶν] is wiser [σοφώτερον]'.[111] He justifies his position by arguing thus: 'But the science which investigates causes [ἡ τῶν αἰτιῶν θεωρητική] is also more [μᾶλλον] capable of teaching [διδασκαλική], as the people who teach [διδάσκουσιν] are those who tell [λέγοντες] the causes of each thing [περὶ ἑκάστου].'[112] One might trace the root

[111] *Met*. A, 2, 982a12-14.
[112] *Met*. A, 2, 982a28-30.

of this characteristic of Wisdom to the first part of Book A, where Aristotle emphasises the superiority of the knowledge of causes and differentiates knowing the fact from knowing the cause, which is the underlying factor that distinguishes experience and art and gives the latter a higher status in the hierarchy of knowledge.[113] This avenue of approach necessitates that a man becomes wise as he gets to know the causes and deserves to be called wiser as he knows higher causes. The one who knows the highest principles and causes, therefore, should be regarded as the wisest among others. Along with this Aristotle attaches another feature to the superiority of knowing by causes in the first part of Book A, according to which knowledge of the causes yields the capability to teach (δύνασθαι διδάσκειν).[114] Hence, we might reasonably affirm that, when discussing the fourth characteristic of Wisdom in the second chapter of Book A, Aristotle completes the line of argument started in the first chapter of Book A by describing teaching as 'telling the causes of each thing' (τὰς αἰτίας λέγοντες περὶ ἑκάστου). Hence, the more one knows the causes, the more he can tell about them, that is, the more he can teach. Accordingly, one who knows the highest causes is able to teach more than one who knows merely the subordinating causes, since through knowing the highest causes the wise man knows in a way all the subordinating causes. This is also perfectly in line with the universality of Wisdom, which I have previously discussed, which is encapsulated thus: 'The wise man knows all things as far as possible'.[115] Thus, since teaching is described as telling the cause of a thing and since Wisdom deals with the highest principles and causes, Wisdom should be regarded as the most teachable science amongst others.

In terms of what this characteristic says with respect to the theological conception of Wisdom, we can say this. Since Aristotle explicitly states that God should be regarded as the highest principle of all things,[116] the one who has knowledge of God will be the most capable of teaching. Wisdom, then, can be

[113] *Met*. A, 1, 981a24 ff.
[114] *Met*. A, 1, 981b7.
[115] *Met*. A, 2, 982a8-9.
[116] *Met*. A, 2, 983a8.

regarded as the most teachable science amongst others if it deals with the highest principle of all things, that is, if it deals with God. As with the previous characteristics of Wisdom, it is beyond Aristotle's aim in this introductory part to reveal and justify God's functioning as an ultimate principle. He does not even explicitly mention God when he discusses this characteristic,[117] but given what we have been told with respect to teaching we might justifiably affirm that this interpretation is fully apt and that Wisdom is envisaged eminently as a theological science.

It is important, here, to be clear about what it is for a science to be most teachable otherwise one might have some confusion as to whether this feature of Wisdom is reconcilable with its second characteristic, according to which Wisdom is the knowledge of things that are hardest to know. In other words, one might be inclined to question whether Wisdom is at the same time the science of the things that are most teachable and the things that are hardest to learn. It is, however, important to record straightaway that Aristotle does *not* say that the most teachable things are the things that are most easy to learn.

Now, I think, this may be brought to the fore if one considers the distinction between things 'more knowable to us' and those 'knowable in nature' that I have previously discussed, according to which the most knowable things are furthest away from sensation and for that reason are hardest to learn, whereas the things about which one can easily attain knowledge are the least knowable as they are nearer to perception. Therefore, these two characteristics of Wisdom, namely that it entails the knowledge of things that are hardest to learn and is the most instructive science, square well with each other once we introduce the Aristotelian distinction between 'knowable in nature' and 'knowable by us' to the discussion.

[117] Note, however, that Aristotle explicitly states that God is the subject of Wisdom when he discusses the divinity of Wisdom later in the same part where he enumerates the characteristics of Wisdom (983a5ff.).

The upshot of this discussion is that precisely because Wisdom deals with things that are knowable in nature it is dealing with most teachable things. As we shall see later in the middle books of *Metaphysics*, the form that constitutes the very nature of things 'knowable in nature' makes them perfectly intelligible. These things, however, are not the easiest to learn; on the contrary, the things that are knowable by us whose natures consist more of matter than form are easiest to learn since they are nearer to perception. We shall see later that this line of thought is not abandoned in the further stages of *Metaphysics*. The intelligibility of form over matter, as evident throughout the treatises of *Metaphysics*, is a constant theme to which Aristotle continually returns in order to articulate the point to the full. Hence, Wisdom's being the science of the most teachable things and against which this discussion supposedly propels, namely that the distinction between what is knowable by us and knowable in nature, and for that matter, the distinction between matter and form, does not constitute a stance that Aristotle has trouble in accepting at any level of his analysis.

1.2.5. Wisdom: the Science Desired for its own Sake

Having stated that Wisdom is the most teachable science, Aristotle proceeds to describe the fifth characteristic of Wisdom:

> In every branch of knowledge; and of the sciences, also, that which is desirable on its own account [τὴν αὑτῆς ἕνεκεν] and for the sake of knowing [εἰδέναι] it is more of the nature of wisdom than that which is desirable on account of its results [τῶν ἀποβαινόντων] (...)[118]

While providing an explanation for this characteristic Aristotle uses the idea that Wisdom is the science of the most knowable things:

> And understanding and knowledge pursued for their own sake [αὐτῶν ἕνεκα] are found most in the knowledge of that which is most knowable [τοῦ μάλιστα ἐπιστητοῦ]; for he who chooses to know for the sake of knowing [τὸ ἐπίστασθαι δι'αὑτὸ αἱρούμενος] will choose [αἱρήσεται] most readily that which is most truly knowledge [τὴν μάλιστα ἐπιστήμην], and such is the knowledge of that which is most knowable [ἡ τοῦ μάλιστα ἐπιστητοῦ]; and the first principles and the causes are most knowable [μάλιστα δ'ἐπιστητά];

[118] *Met*. A, 2, 982a14-16.

> for by reason of these, and from these [ἐκ τούτων], all other things are known [γνωρίζεται], but these are not known by means of the things subordinate to them [διὰ τῶν ὑποκειμένων].[119]

Wisdom, according to these passages, is the science that is desirable purely on its own account. The possibility for Wisdom to be desired on its own account lies in the kind of knowledge that it seeks, which is previously implied by Aristotle in the hierarchy of knowledge presented in the preceding section of Book A. The hierarchy of knowledge, as I have mentioned, starts with the things that are most knowable for us and terminates in the highest knowledge reflected as the things that are knowable in nature, and Wisdom corresponds to the highest point of this hierarchy. The fifth characteristic of Wisdom is a result of the continuation of this line of thought, as Aristotle states that the condition for being desired on its own account can only be attainable for a science that deals with the things that are most knowable. Now, surely, most knowable things are those that are knowable in nature rather than the things that are knowable according to us. Hence, the kind of knowledge that Wisdom seeks is doubly established as the things that are knowable in nature.

Aristotle continues to determine the content of things knowable in nature by stating that they are the first principles and causes through which we learn other things. The motive for this further determination is to show that such knowledge should be regarded as a genuine instance of knowledge and *only* such knowledge deserves to be desired on its own account. Indeed, Aristotle is right in implying that the knowledge of principles is a genuine instance of knowledge, as we learn other things through knowing the principles. According to *Posterior Analytics*, all knowledge must proceed from pre-existent knowledge,[120] which is later explicated as basic propositions and definitions.[121] These can be regarded as the first principles, without which it is impossible to learn anything at all.[122] Since their priority over conclusions, i.e. the secondary

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[119] *Met*. A, 2, 982a30-b4.
[120] *An. Post*. I, 1, 71a1.
[121] *An. Post*. I, 1, 71a12-16.
[122] These principles are the basic components of a science, which are true (ἐξ ἀληθῶν), primitive (πρώτων), immediate (ἀμέσων), more knowable than (γνωριμωτέρων) and prior (προτέρων) to the conclusions (συμπεράσματος) *An. Post*. I, 2, 71b23.

instances of knowledge, is obvious, cognition these principles should be regarded as the genuine instances of knowledge, and for this reason such knowledge deserves to be desired on its own account.

Neither the wise man nor Wisdom aims at any utility in life; rather, the wise man aims to attain the highest knowledge reflected as the knowledge of things that are most knowable in nature. This can only be attained through the science of Wisdom. By virtue of having a reflexive character, Wisdom is differentiated from other types of knowledge that aim at external utility. I should record that it is *not* Aristotle's intention to state that we do not gain any utility from Wisdom; rather, what he says is that we do not gain merely a practical utility from the science of Wisdom, as according to him it is a merit of excellence of any kind of knowledge to have reflexive character and the activity with which Wisdom is associated is accordingly connected with excellence (ἀρετή)[123] and self-sufficiency (αὐτάρκεια).[124] When this activity, described as the activity of the contemplation (Θεωρεῖν) of truth is put into practice, as maintained in the ethical works, it produces the complete happiness (εὐδαιμονία)[125] that can be regarded as the ultimate aim (τέλος) of humankind. Wisdom denotes the kind of knowledge that carries us to this aim, for which reason it is loved for its own sake and its utility overflows beyond the limits of other types of knowledge that aim to gain some practical utility in life.

This characteristic is in agreement not only with what Aristotle maintains in his ethical works but also with what he maintains in Book E, where he shows that 'First Philosophy' is a theoretical science.[126] In agreement with what he claims in that part of *Metaphysics*, Aristotle claims in Book A that Wisdom cannot be a science of production (ποιητική) precisely because of its self-reflexive character.[127] He proceeds by stating that 'wonder' is the basic source of our

[123] *VV* 1, 1249b25; 1, 1250a4.
[124] *EN* X, 7, 1177a27.
[125] *EN* X, 7, 1177a10-1177b5. Cf. VV 1, 1249b25; 2, 1250a4.
[126] *Met*. E, 1, 1026a10-16.
[127] *Met*. A, 2, 982b11 ff. I will deal with the threefold division of sciences and the place of Wisdom in this division later in the third chapter.

philosophical motivations. He shows that man begins to philosophise (φιλοσοφεῖν) by wondering (θαυμάζειν) about things surrounding him. By way of these wonderful things, man comes to understand that he is ignorant (ἀγνοεῖν) of many things. The basic motive that impels man to philosophise (φιλοσοφεῖν) is therefore to 'escape from ignorance [διὰ τὸ φεύγειν τὴν ἄγνοιαν]'. Since ignorance is the basic motive for man's philosophical preparations, he should be pursuing this science simply 'in order to know [διὰ τὸ εἰδέναι]' rather than for any practical or productive end.

Again, among the other sciences only Wisdom can be regarded as a free (ἐλεύθερος) science.[128] Since we call free those, who exists for themselves (αὐτοῦ ἕνεκα)[129] Wisdom should be regarded as the only free science among others. Wisdom, in other words, is the only science that is self-reflexive. In contrast with productive sciences whose major aim is the formation of an external product, Wisdom aims at nothing other than itself. This, as I have mentioned is in perfect harmony with what he maintains in Book E.

It is a very complicated idea that a science is to be desired for its own sake, since Aristotle denies that it is pursued for any practical value or any utility; nor can we say that we pursue Wisdom for pleasure, although certainly we take pleasure in it. If we cannot pursue Wisdom for any practical value or for any pleasure, then it seems obvious that such a science must have a subject matter, which in a certain sense demands attention to no practical end; there is therefore nothing to do but try to understand it. That seems to be perfectly in line with what Aristotle maintains in Book Λ with respect to the nature of God, where Aristotle will prove that God, and only God, deserves to be the most desirable thing in the Universe.[130] This stance is similar to the religious idea of reverence. Given the textual evidence, God is among the principles and is the first principle of things, and is most knowable and most desirable. The knowledge that occupies itself with God should be regarded as the only one,

[128] *Met*. A, 2, 982b24.
[129] Along with the passage that I am now discussing see also *Pol*. I, 4, 1254a14; VIII, 3, 1338b3.
[130] *Met*. Λ, 7, 1072a27-1072b1.

which amounts to being desired on its own account precisely because God is the most desirable thing in the Universe. Aristotle's declarations in Book A are evidently in perfect accordance with the general schema provided in Book Λ inasmuch as God is the most desirable amongst things in the Universe. The conclusion is that Aristotle must have a conception of a theological science when he enumerates the characteristics of Wisdom, which is in line with the doctrine of God presented in Book Λ.

1.2.6. Wisdom: the most Authoritative Science

Aristotle proceeds to describe the sixth characteristic of Wisdom, stating that it is the most authoritative science:

> And the superior science is more of the nature of wisdom than the ancillary; as the wise man must not be ordered [ἐπιτάττεσθαι] but must order, and he must not obey [πείθεσθαι] another, but the less wise [τὸν ἧττον σοφόν] must obey *him*.[131]

A little later he states:

> And the science which knows [ἡ γνωρίζουσα] to what end each thing must be done [τίνος ἕνεκέν ἐστι πρακτέον ἕκαστον] is the most authoritative [ἀρχικωτάτη] of the sciences, and more authoritative [μᾶλλον ἀρχική] than any ancillary science; and this end is the good in each class [τὰγαθὸν ἑκάστου], and in general the supreme good [τὸ ἄριστον] in the whole of nature [ἐν τῇ φύσει πάσῃ].[132]

Wisdom should be regarded as the most authoritative of the sciences in that it is the supreme science that should rule the others and is not to be ruled by any ancillary science. Aristotle's justification is more important than it may seem in the first instance because it explicitly states that the fundamental subject matter of Wisdom deals with is the 'supreme good in the whole of nature [τὸ ἄριστον ἐν τῇ φύσει πάσῃ]'. A component of this justification might be found in Aristotle's previous discussion that started in the first chapter of Book A, where Aristotle emphasised the superiority of the knowledge of the universal over the knowledge of particulars. One who knows the superior knowledge knows all the subordinate knowledge, albeit he might lack the knowledge of it

[131] *Met*. A, 2, 982a16-19.
[132] *Met*. A, 2, 982b4-7.

individually,[133] which amounts to saying that he knows what all knowledge inclines towards.[134] The epistemological requirement, which says that Wisdom deals with the most universal knowledge, is reflected in the text as the 'supreme good in the whole of nature'. Only through studying this i.e. the supreme good, does Wisdom deserve to be the highest and most authoritative science.

This characteristic, perhaps more than the others, implies that Wisdom is by its nature a theological science. If Wisdom deals with the supreme good then, given Aristotle's general metaphysical doctrine, it should also deal with God.[135] It naturally aims to know 'to what end each thing must be done', i.e. the final principle of all that *are* that is correlated with God, as we shall see in the following chapters of this thesis. Through knowing this principle, namely God, Wisdom *in a way* knows all the subordinate principles for which reason in turn it ought to be regarded as the science that should rule rather than be ruled and therefore as the most authoritative of all. It is, as it were, impossible at this point to show how in actuality the universality of Wisdom through the study of God would be possible and I shall deal with this issue throughout this thesis. We may, however, state that along with this characteristic we are fully to be guided towards a theological elucidation of Wisdom in Book A.

1.3. Conclusion: The Divinity of Wisdom

From all that has been discussed we might affirm that Wisdom draws many peculiar characteristics to itself all of which show that it is, on this introductory level, eminently conceptualised as a theological science in Aristotle's mind. It is the science of the most universal, most exact and most difficult that should not only be regarded as the most teachable and authoritative science but also as the only free science, which is desired for its own sake. All of these characteristics, as I have observed, have distinctive relations with the theological conception of

[133] Cf. *Met*. A, 2, 982a8-9.
[134] Book Γ is meant to show that this 'universal science' does not absorb other ancillary sciences in its comprehensive universality. I will deal with this issue in the next chapter.
[135] See *Met*. Book Λ, 7.

Wisdom. It would not, then, be surprising if Aristotle were to investigate the theological character of Wisdom in this section of *Metaphysics* on its own behalf. Indeed, this is what Aristotle intends to do in the last section of the second chapter of Book A as if this is a natural outcome of what he has been previously claiming with respect to the peculiar characteristics of this science.

Aristotle starts his discussion by questioning whether the activity of Wisdom is beyond human powers. He takes up the idea that it is only God, who has this science.[136] Accordingly, if Wisdom were reserved to God alone, then it would not be appropriate for humans to seek the knowledge that is beyond their power. After all, such a person may evoke God's jealousy and His anger. This idea is, however, immediately discarded on the grounds that, as Aristotle confidently concludes, it is impossible for God to be jealous.[137] Wisdom therefore endures as the most honourable activity for humans. Indeed, Aristotle's general attitude to this topic is encapsulated in a beautiful passage from *Nicomachean Ethics*, where he not only abandons the notion that what is divine is beyond human powers but also encourages us to pursue and live according to this perception.

> But such a life would be too high [κρείττων] for man; for it is not insofar as he is man [ᾗ ἄνθρωπός] that he will live so, but insofar as something divine [ᾗ θεῖόν] is present in him; and by so much as this is superior to our composite [συνθέτου] nature is its activity superior to that which is the exercise of the other kind of excellence. If intellect is divine [εἰ δὴ θεῖον ὁ νοῦς], then, in comparison with man, the life according to it [ὁ κατὰ τοῦτον βίος] is divine [θεῖος] in comparison with human life. But we must not [οὐ χρὴ] follow those who advise us, being men, to think of human things, and being mortal, of mortal things, but must, so far as we can, make ourselves immortal [ὄντα οὐδὲ θνητὰ], and strain every nerve to live in accordance with the best thing [τὸ κράτιστον] in us; for even if it be small [μικρόν] in bulk, much more does it in power and worth surpass everything [δυνάμει καὶ τιμιότητι πολὺ μᾶλλον πάντων ὑπερέχει].[138]

Wisdom, therefore, is not to be excluded from the realm of human intellectual power; instead, it remains the most honourable, and the most desirable, activity that a man can undertake. Later in Book Λ we shall see that both God and

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[136] *Met*. A, 2, 983a28 ff.
[137] For the Platonic background of the rejection of a jealous God see *Timaeus*, 29e; *Phaedrus*, 247a.
[138] *EN*, X, 7, 1177b26-1178a2.

humans, though in different respects, enjoy the activity of Wisdom.[139] Leaving this discussion for now, I will now reveal why Aristotle regards Wisdom as a divine science.

According to Aristotle, two distinctive conditions should be met if a science is to be regarded as divine. First, in order to be called divine, a science should be possessed by God Himself.[140] In other words, divine science is the one that is covered by God's knowledge. Second, if a science is to be called divine then it should deal with divine things. Now, according to Aristotle, both of these conditions are met by Wisdom. Naturally, at this stage it is almost impossible for Aristotle to justify his position to the full since this requires a grand doctrine concerning the nature of God, and this will be established later in Book Λ. Aristotle is therefore content to state that God is among the causes and is a first principle, and that it is most convenient to think that this science is possessed by God *alone*. It is indeed true that God should be regarded as the ultimate aim (τέλος) of the Universe and so He should be regarded as one of the highest causes of things. One might, however, be inclined to question whether this conclusion is in line with Aristotle's declarations in Book Λ, where he establishes that God's knowledge is limited to the knowledge of Himself.[141] Hence, rather than possessing knowledge of the highest principles and causes, God's knowledge is limited to Himself, namely, the theological cause. It seems that the prima facie inconsistency between Book A and Book Λ can be discarded if we can either limit the principles and causes that Wisdom attributes to the

[139] See *Met*. Λ, 1072b14ff.

[140] One could be puzzled about the nature of God that Aristotle has in mind in this first section, that is, whether it should be regarded as an impersonal principle or a living and thinking God, a God who is personal. If the latter is the case, (for which see Reale (1980), p. 22) then it may be appropriate to capitalise the notion as it is in the Christian doctrine. On the other hand, if this God is to be understood as an impersonal principle then this should be avoided (for this latter view, see Owens (1951), p. 171, n. 47). Though it is impossible to justify it fully, I prefer to follow the first interpretation, since I do not see any systematic or doctrinal obstacle to regarding the notion of God presented in this first book of *Metaphysics* as a personal, living and thinking God, just like the one presented in the later stages of *Metaphysics*. Even if this is the case, one may still question this tendency to capitalise the notion of God. I accept such reactions, however, remain to capitalise the notion just to emphasise that God is not just an impersonal principle.

[141] See, for instance, Ross's commentary (1924, I, p. 123), where he finds Aristotle's position inconsistent with his own doctrine in Book Λ.

theological cause or expand God's knowledge to the other principles and causes.

Without trying to exonerate Aristotle completely, I hold that such suspicions are not always well founded. We should not reach a conclusive judgement as regards this puzzle without taking into consideration what Aristotle reveals throughout his discussion of the science of first principles and causes. Now, although this is not to place to do this I suggest examining the first *aporia* of Book B, for instance, where Aristotle asks whether the investigation of the causes belongs to one or more sciences,[142] before judging whether Aristotle's remarks in Book A are inconsistent with his doctrine in Book Λ. Without going into detail, we can record at the outset that the reduction of the causes to a single cause would be sufficient to solve this puzzle.[143] If, in other words, Aristotle manages to show that the highest principles and causes of things can be reflected in a single cause, then the riddle of the unity of the highest science, that is, whether it deals with one or many causes, will be resolved.[144] This, in turn, would imply that there is a *possibility* that Aristotle could reduce the several principles and causes to a single cause. The science, therefore, that busies itself with this single cause would also be dealing with the other causes. There is therefore a possibility that the scope of Wisdom can extend to other principles *through* the knowledge of a single principle, which, in turn, may well be at one and the same time the cause, which God knows, and God Himself. In such circumstances, then, it would be possible for Wisdom to cover both God's knowledge of Himself and the knowledge of the remaining highest causes and principles. Such a scenario, though not yet justified, would solve the prima facie inconsistency between the two treatises of *Metaphysics*. What we have, then, is not an inconsistency but a deficiency that may be satisfactorily resolved in the later stages of the treatise.

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[142] *Met*. B, 1, 995b10; 2, 996a18ff.
[143] I will deal with the puzzle in detail when I discuss Book Λ; see 5.5.3.
[144] I will deal whether it is possible to reduce the causes into one more elaborately in chapter V.

Having examined the first two chapters of Book A, we can assert that what Aristotle has said with respect to Wisdom reasonably allows us to affirm that what he has in mind in this introductory analysis is a theological science. Both the hierarchy of knowledge that is established in the first chapter and the characteristics of Wisdom stated in the second chapter imply that Wisdom should essentially be regarded as theology. The question, then, is to what extent Aristotle is faithful in the later stages of his analysis to the characteristics of Wisdom that he establishes in this introductory part. One must consider therefore whether Aristotle continues to hold the theological tendency of Book A with respect to Wisdom in the later stages of *Metaphysics* as well, where we encounter more advanced elucidations of the science in question. Although this is exactly what I aim to examine in what follows, where I test the doctrines in Book Γ that treat the science of Being, which will from now on be presented as the 'First Philosophy', against the theological backdrop of Aristotle's initial investigations in Book A, one might affirm, at least provisionally anyway, that the hierarchy of knowledge, that starts from perception and continues all the way through the highest principles and causes of things, and that squares very well with the what is knowable by us and what is knowable in nature distinction, reflects an unquestionably Aristotelian thought. This appearance is also in harmony with what Aristotle maintains with respect to the characteristics of Wisdom in the second section of Book A, which, I think, is not abandoned in more elaborate later stages of Aristotelian doctrine.

CHAPTER II

2.1. Introduction

An inquiry into what kind of science Aristotle advances in his *Metaphysics* undeniably requires a close examination of Book Γ, since it is there that Aristotle seems to be making his first systematic efforts to construct the science of Being. Given what he says about the science of Being in Book Γ and in the light of what he also says about it in other treatises of *Metaphysics*, especially in Book E and Book Λ, one might reasonably be confused, at least initially, by the complex picture of the doctrine of the science of Being that he seems to be suggesting.

The text of Book Γ forcefully asserts that the science of Being should be a universal inquiry into Being qua Being:

> There is a science [ἐπιστήμη] which investigates [θεωρεῖ] being as being [ὂν ᾗ ὄν] and the attributes which belong to this in virtue of its own nature [καὶ τὰ τούτῳ ὑπάρχοντα καθ᾽ αὑτό]. Now this is not the same as any of the so-called special sciences; for none of these others deals generally with being as being [καθόλου περὶ τοῦ ὄντος ᾗ ὄν]. They cut off [ἀποτεμόμεναι] a part of being and investigate the attributes [τὸ συμβεβηκός] of this part - this is what the mathematical sciences for instance do.[1]

In accordance with these opening sentences of Book Γ, one might reasonably feel obliged to contrast the science of Being with the other so-called special sciences (e.g. physics) in terms of their level of universality. The other so-called special sciences cut off (ἀποτεμόμεναι) a part of Being and investigate that part, whereas the science of Being inquires into Being qua Being in a universal way. Judging from these lines, therefore, one gets the strong feeling that in Book Γ Aristotle is suggesting a universal science (*metaphysica generalis*) which does not limit its inquiry to a part of Being – that is, what the so-called special sciences do – while studying all types of Beings in so far as they are Beings. However that may be, in other passages that we encounter in the other treatises of

[1] *Met*. Γ, 1, 1003a20-26.

Metaphysics – and, for that matter, in other Aristotelian writings – Aristotle seems to be suggesting a different kind of conception of the science of Being, which is supposed to be dealing with an instance of Being (*metaphysica specialis*), that is, the highest instance of Being. In these passages, Aristotle seems, at least in the first instance, not to refer to a universal study of Being:

> There must, then, be three theoretical philosophies [φιλοσοφίαι θεωρητικαί], mathematics [μαθηματική], natural science [φυσική], and theology [θεολογική], since it is obvious that if the divine [τὸ θεῖον] is present anywhere [ὑπάρχει], it is present in things of this sort. And the highest science [τὴν τιμιωτάτην] must deal with the highest genus [δεῖ περὶ τὸ τιμιώτατον γένος], so that the theoretical sciences [θεωρητικαὶ] are superior to the other sciences [τῶν ἄλλων ἐπιστημῶν], and this [theology] to the other theoretical sciences [τῶν θεωρητικῶν].[2]

The science of Being, according to this passage, turns out to be a theological science, dealing with the first instance of Being and so it seems to be a special science that concerns itself with some determined part of Being, namely, the divine, rather than with all things in so far as they are Beings, as has been claimed in Book Γ. Understood thus, this and similar remarks pack quite a punch, and, in context, this is jarring, for such assertions collide head-on with the non-theological conception of the science of Being that one encounters in Book Γ.

Modern scholars are understandably puzzled by this seemingly contradictory appearance of the conception of the science of Being that Aristotle seems to espouse in different treatises of *Metaphysics*. Some philosophers find irreconcilable contradictions between these two determinations of the science of Being and have attempted to solve the problem by appealing to Aristotle's philosophical development, a stance that appears in its most developed form in Jaeger, who stated firmly that 'the contradiction is undeniable'.[3] More recently Leszl claimed that the conception of the science of Being that appears in Book Γ,

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[2] *Met*. E, 1, 1026a18-23. One can find similar theological assertions of the science of Being in *Phys*. I, 9, 192a34; II, 2, 194b14; *Met*. K, 7, 1064b4; Λ, 1, 1069b1.

[3] Jaeger (1962), p. 217. Zeller can be regarded as an exception to these scholars as he also finds in Aristotle conflicting conceptions of the science of Being but sees the origin of this contradictory appearance in two incompatible conceptions of reality rather than in Aristotle's philosophical development (see (1897), p. 339).

which is to be identified with ontology, should be regarded as a separate science that can in no way be identified by theology. These two sciences, as Leszl notes, 'are sufficiently *sui generis*'.[4] Similarly, Owen has noted that Book Γ goes far beyond Book A and Book Λ in its conception of the universal science of Being.[5] What I find very significant, however, is that Owen stresses, perhaps far better than other scholars, the importance of the *pros hen* relation (what he calls 'focal meaning') in Aristotle's conception of the science of Being. The basic motivation for Aristotle's philosophical development, as Owen observes, is to be found in the notion of *pros hen*. I think that Owen is absolutely right in situating the problem of the unity of the seemingly diversified conceptions of the science of Being in Aristotle's conceptualisation of the *pros hen* relation in Book Γ and we will see why in this chapter.

In contrast to scholars who are so ready to find contradictions in different conceptions of the science of Being, a more 'unitarian' and 'traditional' view continues to be advocated by many, who aver that it is indeed possible to find reconcilability between what one could call the universal metaphysics of Book Γ and the theological conception of the same science expressed in Book E and Book Λ. Preeminent advocates of the latter view include Owens, Patzig and Reale.[6] Although all of the unitarians more or less accept that the possible solution to the problem of the unity of the conceptions of the science of Being must rely upon the *pros hen* relation of Book Γ, I believe they do not articulate this relation as it ought to be articulated, so consensus cannot be achieved.

One's first reaction to this puzzle might be to ask whether there is a legitimate way for Aristotle to think at the same time that the science of Being is both a universal science and a special theological science. Unitarians thought that it was indeed possible for a science to be the science of the highest instance of Being, namely, God, and a universal science simultaneously. This stance is rejected by the developmentalists. Owen, indeed, made the bold claim that the

[4] Leszl (1975), p. 32.
[5] Owen (1979), pp. 24-5.
[6] See, Owens (1951); Patzig (1979); Reale (1980).

basic motivation of Aristotle's philosophical development *must* be revealed through close articulation of the *pros hen* relation of Book Γ. In his view, *pros hen* is the basic motivator that paves the way for Aristotle to distance his conception of the science of Being from his previous theological stance. Now I believe, like the unitarians, that it is possible for metaphysics to be a science of the highest Being and at the same time a universal science. What is more, I believe that were it not the science of the highest instance of Being it would not be universal either. Along with Owen, I believe that the *pros hen* relation plays a crucial role in showing the unity of metaphysics. My uneasiness with the scholars who support the unity of metaphysics is that they do not give an account of *pros hen* as explicitly as one would wish.

My aim in this chapter is to assess one side of these seemingly incompatible conceptions of the science of Being by a close examination of the *pros hen* relation that stands out in Book Γ, and to show that this relation, that paves the way for a universal science of Being, might not in fact be incompatible with the theological conception of the science of Being that stands out in other treatises of *Metaphysics*. In my view, what we have been told with respect to the science of Being in Book Γ does not necessarily mean that what we have is a non-theological science of Being. To this end, I will first examine in detail Aristotle's basic motives in establishing the doctrine of the science of Being as it appears in Book Γ, particularly the basis of this doctrine, that is, core-dependent homonymy (CDH).[7] These motives, I believe, play a crucial role in solving the problem of the unity of metaphysics. I will then look at CDH and attempt to derive the basic criteria upon which such a relation is established. Subsequently I will attempt to square this conception with Aristotle's general doctrine of Being, whereby I aim to show that the resulting portrait of the science of Being that springs from the conception of the CDH is not incompatible with the theological conception of the science of Being.

[7] Throughout this thesis I will not resist the temptation to use the terminology with respect to homonymy introduced by Christopher Shields in his *Order in Multiplicity. Homonymy in the Philosophy of Aristotle* (Shields, 1999).

2.2. Core-Dependent Homonymy

A distinguished work written recently by Christopher Shields on Aristotle's conception of *pros hen* defined the relation quite accurately as follows:

> CDH_4:[8] *a* and *b* are homonymously *F* in a core-dependent way iff: (i) they have their name in common, (ii) their definitions do not completely overlap, (iii) necessarily, if *a* is a core instance of *F*-ness, then *b*'s being *F* stands in one of the four causal relations to *a*'s being *F*, and (iv) *a*'s being *F* is asymmetrically responsible for the existence of *b*'s being *F*.[9]

I largely agree with this description but have reservations about some peripheral but nonetheless quite important issues that will be explored later in this chapter. The first two requirements are quite straightforward and stated explicitly by Aristotle himself in *Categories*.[10] I have no difficulty in subscribing to the third requirement, which is examined by Shields after his discussion of Cardinal Cajetan's proposal on CDH.[11] This addresses the causal relations between the instances of CDH, labelled by Shields as *four-causal core primacy* (FCCP) and what I will call 'causal connectedness' in this thesis. The fourth requirement addresses some kind of ontological dependence. I agree with Shields that there must be an ontological relation between the instances of CDH. This description, however, does not explicitly involve what I wish to call 'logical dependence', which I think should be explicitly acknowledged if the requirements of CDH are to be reflected adequately.[12]

It is not necessarily the conceptual framework of CDH reflected as CDH_4 that Shields describes that concerns me. My uneasiness with his proposal lies in his application of this conceptual framework of CDH to the case of Being. His

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[8] In Shields's work, CDH is defined in stages. What I present here is the final version of CDH, which follows three earlier versions believed by Shields to be inadequate to explain this peculiar relation.

[9] Shields (1999), pp. 124-125.

[10] 'When things have only a name in common [ὄνομα μόνον κοινόν] and the definition of being [λόγος τῆς οὐσίας] which corresponds to the name is different [ἕτερος], they are called *homonymous* [Ὁμώνυμα].' *Cat*. 1, 1a1-2.

[11] Shields (1999), pp. 110ff.

[12] This, however, does not mean that Shields does not recognise logical dependency relations – what he calls definitional priority - in CDH; on the contrary, he explicitly discusses this point (p. 123). Accordingly, the fourth characteristic (iv), as it were, may be employed to fulfil the requirements of logical dependence and ontological dependence simultaneously.

assessment of the CDH of Being, I believe, is misguided for two interconnected reasons. First of all, Shields seems to overlook the genuine reason that leads Aristotle to introduce CDH in Book Γ of *Metaphysics*, which, in a nutshell, is to establish a unified science of Being. Second, Shields's argument seems to introduce a rather artificial requirement in the case of the CDH of Being. This is only a procedural reservation, however, and leads Shields to think that Aristotle is not successful in establishing the CDH of Being. According to him, the procedure in showing that a term is a CDH involves stages:

> As we have seen, establishing core-dependent homonymy involves a three-stage process: (i) one must demonstrate non-univocity; (ii) one must then establish association; and finally (iii) one must establish core-dependence in line with CDH_4. Most commentators, fastening on the intuitively compelling idea that substance, *ousia*, is a primary form of being, assume non-univocity and move directly to the core-dependence of non-substantial being on substantial being. In proceeding this way, they assume something false. The arguments of Aristotle's commentators consequently fail to establish non-univocity; and Aristotle's own arguments lapse into internal inconsistency. Hence, since establishing non-univocity is a necessary condition of establishing core-dependent homonymy, no defensible account of the homonymy of being emerges from Aristotle's writings.[13]

Because Shields believes that Aristotle fails to meet the first requirement (i), namely that he fails to show non-synonymy, he is not successful in establishing the CDH of Being. I believe, however, that this requirement is artificial and cannot be grounded by textual evidence. I believe, on the contrary, that once a term fulfils the requirements of CDH, there is no need for a further demonstration that it is *not* synonymous. It is perfectly true that a CDH term cannot be synonymous; although it cannot be a requirement for a CDH term to prove *at the outset* that it is not synonymous. In accordance with this view, Aristotle is not so determined to show that Being is not synonymous in his *Metaphysics* although his general tendency shows most certainly that he believes it to be so. The artificiality of Shields's proposal, I think, derives from the fact that he does not come to grips with understanding the basic motivation that leads Aristotle to establish such a relation in Book Γ, which, as I have mentioned, is to establish the unity of the science of Being rather than to engage in a discussion that will show that Being is not synonymous. The key point,

[13] Shields (1999), pp. 219-220.

therefore, in Aristotle's establishment of the CDH of Being is marked by a problem with respect to the unity of the science of Being rather than a linguistic discussion whether Being, as a term, is synonymous or not. I will accordingly look at the phases of Aristotle's thinking that cause this problem and later show how he manages to solve it by introducing the CDH of Being.

2.2.1. *Aporia*

One of the fundamental aims of Book Γ is to establish the grounds for the science of Being. Aristotle's construction of CDH, as we shall see through the course of this thesis, serves this end in full. The determination of the basic motives behind Aristotle's establishing of CDH in *Metaphysics* can be enlightened by an initial brief exposition of what he understands by the term Being. As we shall see, it is fundamental to any understanding of Aristotle's theory of CDH that it is intended to have a severe anti-Platonic purport. This is more clearly revealed especially when one attempts to discover the difference in what these two philosophers understand by the term Being.

Indeed, what Aristotle understands by the term Being is quite different from his predecessor Plato. The latter thought that if something deserves to be called Being it has such and such qualities (e.g. non-spatial, non-temporal etc.) that are constant in *all* of the instances to which they are applied. This amounts to saying that Being has a single *synonymous* sense that persists in all of its manifestations. This single sense of Being can be revealed by a philosopher *at once* and the science dealing with this sense will deal with all that deserves to be called Being. In such a conception, a single science (i.e., the science of Being) was sufficient to cover all parts of Being while, in its vast comprehensiveness, it would make other sciences unnecessary.[14]

This conception of Being and the science attributed to it, however, does not fit Aristotle's epistemological intentions. Aristotle attempts to differentiate several

[14] Cf. *Republic* VI, 510b-511d.

epistemological realms, dividing them into further piles that constitute the subject matters of several different sciences, every one of which has a different scope reflected precisely in the different objects of their inquiry. If, in this conception, Being had a single sense, then the science dealing with this sense would be dealing with all things that deserve to be called Being. Since a science cannot deal with non-Being, if we were to accept that Being has a single sense, a single science would suffice to cover everything that *is* and we would not need to differentiate several special sciences. Since Aristotle gives much of his attention to the establishment of these special sciences, this conclusion seems to lead one to quite an unhappy result with respect to what Aristotle actually intends to attain with his arguments to establish the so-called special sciences. Thus, if Aristotle intends to establish several special sciences dealing with different parts of Being, he should abandon the idea that Being has a single sense.

Indeed, Aristotle's position about the nature of Being is quite the opposite of Plato's. According to Aristotle, Being is a πολλαχῶς λεγόμενον, i.e., it is said in many ways. In multiple places in his corpus, Aristotle indeed enumerates the 'several manifestations of Being', showing that these manifestations cannot be reduced to a single one. Hence, in Aristotle's conception, Being, as a homonymous term, loses the priority that it has in Plato and stands as a mere name that can be applicable to things that have immensely diverse qualities.[15]

The motive behind the shift of what is to be understood by the term Being in Aristotle thus lies in his attempt to differentiate several sciences from each other, that is, to prevent a line of thought yielding a single gigantic science covering everything that *is*. Hence, in this new formulation of Being, the universal science of Being will not absorb all the other so-called special sciences by its vast comprehensiveness. By declaring that Being has several senses, Aristotle guarantees the existence of the universal science of Being along with

[15] See *Phys.* I, 2, 185a21; *De An.* I, 5, 410a13; *Met.* Γ, 2, 1003b5; Δ, 1017a22-27; E, 2, 1026a33-b2; Z, 1030a21; *EN* I, 6, 1096a24.

the other special sciences. Hence, the puzzle concerning the over-comprehensiveness of the science of Being has been settled. The scope of each special science is determined by the relative manifestation of Being that is proper to that science and that cannot be covered by any other science, not even the science of Being.

While Aristotle overcomes the problem of the over-comprehensiveness of the science of Being by denying the idea that Being is synonymous, he faces further puzzles emerging from his own conception of Being. Indeed, the new conception of Being, with its several manifestations, produces the problem of how these manifestations senses of Being are to be unified to make way for a single science of Being. Hence, the denial of a synonymous conception of Being yields the problem of the unity of the science of Being, which lies in the fact that it is quite difficult to unify the manifestations of Being with which the science of Being is supposed to deal. We now know that, according to Aristotle, Being is a homonymous term that manifests itself in different instances. The difficulties arise because it is hard to decide, first, which of these manifestations will be dealt with by the science of Being, and second, how these manifestations are to be unified so as to give way to a single unified science. In the course of this thesis, I will have the chance to answer the first puzzle, but let me start with the second puzzle, namely, the problem of the unity of the science of Being, since this is directly related to my intention to find the basic motive for the establishment of CDH.

The problem about the unity of the science of Being depends on the important claim made by Aristotle himself in the *Posterior Analytics* that every science deals with a single genus.[16] According to this conception, the scope of any science is limited by the scope of the proper genus addressed by a specific science. Genus, by determining the basic constituents of a science, that is, by determining the subject, principles, parts and attributes of a science, draws the

[16] *An. Post.* I, 28, 87a38 ff. Cf. *An. Post.* I, 10, 75b37-38.

limits of sciences.[17] In this conception, a science, say, arithmetic, will deal with numbers, while the arithmetician will not go beyond the limits of inquiry provided by the proper genus he studies. In the same way, the astronomer will deal with a single genus and the species proper to that genus without exceeding the natural limits of the hierarchies of genera and species established in the highest genus he/she studies, namely, the celestial bodies.

One might prefer to call this 'the single genus principle', which might initially seem an artificial epistemic requirement if we were not to inquire into the reasons why Aristotle needed to introduce this requirement. Sciences, in the Aristotelian conception, proceed by demonstrations that are founded upon what Aristotle calls syllogisms. These syllogisms can only be constructed by the necessary relations among the constituent elements of demonstration, namely, the middle and the extreme terms. Now, the necessary relations required between the elements of syllogisms can be found only within a single genus. This amounts to saying that we can only construct syllogisms within a single genus. These syllogisms in turn constitute the main body of any scientific knowledge. Therefore, the explanatory chains cannot pass from one genus to another, since this impedes the requirement of a necessary relation between the elements of syllogisms, yielding a clash in the logical structure as a result of which no conclusion can be drawn from the premises. Accordingly, passing from one genus to another while constructing a syllogism would yield what Aristotle calls the problem of μετάβασις:

> Hence the kind [γένος] must be the same, either *simpliciter* [ἁπλῶς] or in some respect, if a demonstration [ἡ ἀπόδειξις] is to cross [μεταβαίνειν]. That it is impossible otherwise is plain; for the extremes [τὰ ἄκρα] and the middle terms [τὰ μέσα] must come from the same kind [ἐκ γὰρ τοῦ αὐτοῦ γένους], since if they do not hold in themselves [μὴ καθ᾽ αὑτά], they will be incidentals [συμβεβηκότα].[18]

The elements of a syllogism according to this passage, namely, the extremes and middle terms, should be in the same genus, otherwise it is impossible to fulfil the required necessary relations between these elements. The basic

[17] *An. Post*. I, 28.
[18] *An. Post*. I, 7, 75b8-16. This is confirmed also in *An. Post*. I, 9, 75b37-38; 76a22.

explanatory element, the middle term, which constitutes the cause of what has been explained and upon which a syllogism is constructed, is ultimately the proper genus of what is to be explained. The genus, therefore, formulates the basic nature (φύσις) by which and in which explanatory chains are constructed. Therefore, it would not be perverse to think of a genus as the proper cause of its subordinating species. Since everything should be explained in terms of its proper necessary causes, rather than in terms of its accidental causes,[19] sciences should proceed in their proper genera.

This relation found between the genera and their related species is a *kata hen* type, in which genus plays the role of being a common nature reflected equally by all the subordinating instances to which it is predicated. This paves the way for a community of species to be gathered together under the umbrella of a single genus that can be predicated on these species synonymously. Indeed, the ordinary *kata hen* structures, in which several species are structured beneath a single genus, is based upon the synonymous references found between genus and species.[20] The grounds for the synonymous predications found in *kata hen* relations lie in the fact that all the species share exactly the same common nature reflected in their respective genus. Hence, the synonymous reference and necessary relations mark the basic characteristic of these *kata hen* constructions, through which, according to Aristotle, every so-called special science proceeds.

Now, recall that Aristotle has already declared that Being is a πολλαχῶς λεγόμενον. This amounts to saying that Being has many manifestations that cannot be reduced to a single one and cannot be reduced to a single genus. Indeed in several places in his corpus, Aristotle explicitly claims that Being is

[19] See, *An. Post*. I, 6.

[20] See *Top*. IV, 6, 127b6-7: 'For the genus is always predicated of its species synonymously [κατὰ πάντων γὰρ τῶν εἰδῶν συνωνύμως τὸ γένος κατηγορεῖται].' Additionally, in *Top*. II, 2, 109b4: 'For a predicate drawn from the genus is never ascribed to the species in a derived form [παρωνύμως], but always the genera are predicated of their species synonymously [πάντα συνωνύμως τὰ γένη τῶν εἰδῶν κατηγορεῖται]; for the species take on both the name [τοὔνομα] and the account [τὸν λόγον] of their genera.' Cf. also *Cat*. 5. 3a34-3b9; *Top*. IV, 3, 123a27; VII, 4, 154a18.

not a genus.[21] This explains why the problem of the unity of the science of Being emerges. Since Being is not a genus and since, as I have explained, every science deals with a single genus, it is obvious that there cannot be a science of Being that is based on ordinary *kata hen* relations. The so-called special sciences are unified by virtue of dealing with a single genus, whereas it is impossible for the science of Being to be unified by a single genus, simply because Being is not a genus. Being, in this context, is a πολλαχῶς λεγόμενον, that is, it is a homonym and does not constitute a common nature that can be reflected in all of its instances. It is in no way predicated synonymously of all of its instances, as we encounter in ordinary *kata hen* relations found between genera and their respective species. In the latter structure, synonymy is the dominant link between not only the genus and its respective species but also between the species and its respective individuals.[22] While genus is always predicated of its species synonymously, as we have seen, this is not to be the case with Being. According to Aristotle, therefore, there must be a major difference between the relation in the hierarchies of kinds where genera and species are synonymously linked to each other and the case of Being, which is a homonymous one.

Now, when Aristotle declares that Being is a πολλαχῶς λεγόμενον, as we have seen, he immediately comes up against the problem of the unity of the science of Being. Aristotle's motivation in Book Γ is just to get out of this problem, and thereby to show that a science of Being is still possible even if its subject matter, namely, Being, does not constitute a single genus while in the other sciences we always have a single genus. In other words, the basic motivation for Aristotle's establishment of the CDH of Being lies in the fact that Being is a πολλαχῶς λεγόμενον and that it is not a genus. Shields's argument, on the other hand, seems to deviate somewhat. Although he acknowledges the problem of the unity of the science of Being, he thinks that the key point in the CDH of Being is to show that Being is non-synonymous, which is not the essential point that Aristotle is making. Aristotle's enterprise is not to engage in a linguistic

[21] See *An. Post*. II, 7, 92b14; *Top*. 5, 6, 127a26ff; 7, 144a31-b1; *Soph. El*. 11, 172a14; *Met*. B, 3, 998b22; H, 6, 1045b5; K, 1, 1059b31; *EN* I, 6, 1096a23; *EE* I, 8, 1217b35.
[22] See *Cat*. 5. 3a34-3b9; *Top*. II, 2, 109b5; IV, 3, 123a27; 6, 127b5ff.; VII, 4, 154a18.

discussion whereby he shows that Being is non-synonymous; rather, it seems to me that his basic rationale in applying CDH to the case of Being is that Being is not a genus and therefore cannot be studied through the lens of ordinary *kata hen* relations. This gives Aristotle the problem of the unity of the science of Being and he can only find his way out through a single science of Being by CDH. Hence, the key point, the motivation and the outcome of Book Γ are not fundamentally linguistic, as Shields seems to suppose.

One may question, at this point, how Aristotle might succeed with the claim that Being is a πολλαχῶς λεγόμενον and that it is not a genus. His justification is grounded upon the fact that, while genus can *only* be predicated of its species, Being can be predicated of both species and differentia. Accordingly, if Being were a genus, then it would not be possible for it to be predicated of its differentiae. Aristotle's denial that genus cannot be predicated of its differentiae is the most fragile point of this argument and for this reason, one may rightfully require further support for this position. It is not, indeed, immediately plain why genus cannot be predicated of its differentiae, and I will now very briefly discuss how Aristotle grounds his position. If Aristotle is successful in proving that genus cannot be predicated of its differentiae, then this will immediately yield the result that Being cannot be genus because Being can indeed be predicated of its differentiae. If this is the case, then we understand that the puzzle concerning the unity of the science of Being is not an artificial one; rather, it is a real puzzle that must be resolved if a unified science of Being is to be established.

One can trace two justifications in Aristotle for the statement that genus cannot be predicated of its differentiae.[23] First, according to Aristotle, what is predicated by a genus becomes the species of that genus. In other words, if genus y is predicated of x, then x becomes a species of the genus y. For instance, if we predicate the genus 'animal' of 'men', then 'men' becomes a species of the

[23] See *Top*. VI, 6, 144a36-b3. Aristotle's justification of the fact that Being cannot be regarded as a genus is well explored by several commentators. See, for instance, Ross (1924, I, 235) and Wilson (2000, pp. 136-140).

genus ‘animal’. Now, if genus were predicated of its differentia, then, according to this line of thought, differentia would become the species of the relevant genus. Obviously, this is impossible. For example, if we predicate ‘animal’ of the differentia ‘biped’, then ‘biped’ should become a species of ‘animal’, but clearly it is not a species of the genus ‘animal’. The grounds for the impossibility that any differentia can be species of a genus lie in the fact that these elements, that is, the genus, differentia and species, play different roles in a given classification. Accordingly, the role of differentia is necessarily distinguished from the role played by species. In such a structure, if a differentia becomes the species in virtue of the fact that it is predicated by genus, then the differentia cannot fulfil its proper function of differentiating the genus into species. Hence, if, ‘biped’ becomes the differentia of ‘animal’, it can no longer function as a differentiating tool, that is, it cannot divide the genus ‘animal’ into species, say ‘men’, for it becomes itself a species, and a species cannot divide a genus into other subordinating species. In such a case ‘biped’ would have no difference from another species of ‘animal’ (e.g. ‘men’), for which reason it could no longer fulfil its function in differentiating genus into species.

Genus, in this structure, is seen as a pile, grouping several species beneath itself.[24] In this structure, differentia plays the role of differentiating this pile into sub-groups of species. If we were to convert a differentia to a species by predicating a genus of that differentia, it could no longer divide the pile into sub-groups for it becomes itself a member of that pile. In other words, if we want any differentia to function properly, we should not make that differentia a member of the pile that it is supposed to divide. For this reason, it is impossible for any differentia to be predicated by genus.

The second reason why genus cannot be predicated of its differentiae is based on what Aristotle calls babbling (ἀδολέσχειν). Babbling occurs when someone

[24] I owe the idea that genus can be regarded as a ‘pile’ to Wilson (2000, p. 138).

repeats him- or herself a number of times.[25] If someone gives the same information more than once, then she or he is committing this logical fallacy of babbling. It is not, as Aristotle notes, absurd merely to repeat the words; rather, what is absurd is to predicate the same thing many times of something.[26] Aristotle has noted that babbling is not always plainly detected for the reason that the repeated predications are usually implicit and can easily be overlooked. Aristotle insists, however, that it is a fallacy that should be detected and avoided for a healthy statement of the facts and argumentation.[27]

The relation between the reason why genus cannot be predicated of differentiae and babbling lies in the predication relations between the genera, species and differentiae. In Aristotle's conception, not only is every genus predicated of its species, but every differentia is also predicated of the species. Therefore, if genus were also predicated of differentia, then the species would be doubly predicated, which would result in what Aristotle calls the problem of babbling. For instance, the genus 'animal' and the differentia 'biped' are both predicated of the species 'men'. Now, if genus were predicated of the differentia as well, that is, if 'animal' were predicated of 'biped', then, since the differentia 'biped' and genus 'animal' are both predicated of the species 'men', the species 'men' would be predicated twice as 'men is biped animal animal'. The first 'animal' in this case comes from the differentia and the second comes directly from genus. In such a case, we are in a position to predicate the same thing more than once and this is what is meant by the problem of babbling.

These two arguments prove that genus cannot be predicated of its differentiae. This in turn justifies the claim that Being cannot be a genus for it can, as mentioned, indeed be predicated of species *as well as* differentiae. If, in other words, Being could be regarded as a genus, it would be possible to predicate genera of differentiae. Two arguments are enough to show that this possibility should be ruled out.

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[25] *Soph. El*. 3, 165b12-17.
[26] *Top*. VI, 3, 140b31- 4, 142a2.
[27] *Met*. Z, 5, 1030b35-1031a1.

The puzzle concerning the unity of the science of Being, therefore, is not an artificial one; since every science deals with a single genus, and since Being is not a genus, as has been proved by two arguments, in the limits of ordinary *kata hen* structures there cannot be a unified science of Being. In so-called special sciences, necessary relations between genus, differentiae and species guarantee the possibility of constructing syllogisms that formulate the main body of the science in question. This ordinary *kata hen* structure, however, cannot operate in the case of Being, simply because the most basic constituent of such structures is missing in the case of Being, namely, the genus.[28]

This discussion shows that the problem of the unity of the science of Being cannot be resolved by the ordinary *kata hen* relation found between genera and their respective species; rather, what we need is a new relation that can be grounded on a certain order found in homonymous relations. Indeed, resolving this puzzle through constructing a new relation beyond the synonymous *kata hen* relation is one of the central themes of Book Γ and this is what I shall be discussing in the next section.

2.2.2. *Euphoria*

In the second chapter of Book Γ, Aristotle's chief aim is to overcome the puzzle concerning the unity of the science of Being:

> For not only in the case of things which have one common notion [τῶν καθ᾽ ἓν λεγομένων] does the investigation [θεωρῆσαι] belong to one science, but also in the case of things which are related to one common nature [τῶν πρὸς

[28] One of the natural outcomes of this is that, since the science of Being cannot be grounded upon the synonymous *kata hen* relation between genus and species (for Being, as we have seen, cannot be regarded as a genus), it cannot be a demonstrative science. This point concerning the methodology of the science of Being is very well discussed by Fraser in his 'Demonstrative Science and the Science of Being *Qua* Being' (2002). Fraser has tried to show that even though the science of Being is not established upon a *kata hen* relation, it can still be a demonstrative science by virtue of the necessary relations that can be found between several instances of Being. On the methodology of the science of Being see, also, Terence Irwin (2002).

> μίαν λεγομένων]; for even these in a sense have one common notion [λέγεται καθ᾽ ἓν].[29]

We are told in this passage that it is possible to construct a science beyond the unity of the *kata hen* relation through the unity of things related to one common nature. In this new structure, even though we do not have a genus with which the subordinating species and individuals are bound up in synonymous predications, it becomes possible to unify an investigation of things by virtue of the fact that they are necessarily related to one common nature. This new structure is called core-dependent homonymy (CDH-*pros hen*), which allows several peripheral instances of a homonymous entity or term to be investigated in a unified inquiry.

The most significant aspect of this new structure lies in the details of necessary relations between the core and the peripherals that are supposed to pave the way for a unified inquiry of clusters of instances that are not tied to a genus in the way we encounter in ordinary *kata hen* structures. I shall be dealing with the constituent characteristics of such relations shortly. For now, I record that in CDH, even though we do not have synonymous predications between the several elements of the structure, it is still possible to investigate these non-synonymous instances by means of an order that can be found in the homonymous relation between peripherals and the core. This order is based upon the necessary relations characteristic of CDH. In virtue of the core, then, it is possible that a pile can be formulated. This pile is so similar to the pile created by the genus in the *kata hen* relation that it can fulfil the requirements for a unified investigation. Therefore, by virtue of CDH, even though there is no single genus, it becomes possible to find a common nature through a central term, which builds up the possibility for a unified investigation of instances that are not synonymously predicated by a single genus but have some kind of ordered homonymous structure.

[29] *Met*. Γ, 2, 1003b12-15.

In order to settle the question whether a theological conception of the science of Being is consistent with what we have been told in Book Γ, I should further explicate the details of CDH, which I shall do in the next section.

2.2.3. Synonymy and Homonymy

Having determined the puzzle that provides the backdrop against which the import of Aristotle's conception of CDH is gauged, I have managed to establish one side of the basic framework grounding Aristotle's discussion of CDH. This, however, can be supplemented by another discussion, which will help me to circumscribe the CDH in a better way. In order to explicate CDH further, in this section I will relate it to two proximate terms. These are synonymy and homonymy, which may said to be closely connected to Aristotle's discussion of CDH. Consequently, in this section, I will present a very brief discussion of these terms (i.e., synonymy and homonymy), which will help me to complete the framework for the background against which the discussion of CDH proceeds in *Metaphysics*. This will also help me to derive some tools that may be employed to differentiate CDH, upon which the science of Being is said to be constructed, from the ordinary *kata hen* relations that ground the so-called special sciences.

Aristotle defines synonymy in the first section of *Categories*:

> When things have the name in common [τό τε ὄνομα κοινὸν] and the definition of being [λόγος τῆς οὐσίας] which corresponds to the name is the same [κοινόν], they are called *synonymous*. Thus, for example, both a man [ἄνθρωπος] and an ox [ὁ βοῦς] are animals [ζῷον]. Each of these is called, by a common name, an animal, and the definition of being [ὁ λόγος δὲ τῆς οὐσίας] is also the same [ὁ αὐτός]; for if one is to give the definition of each – what being an animal is for each of them – one will give the same definition [τὸν αὐτὸν λόγον].[30]

When two things have a common name and the definition corresponding to this common name is identical for these two things, then these things are said to be synonymous. For instance, we say 'animal' both for 'man' and for 'ox'. The

[30] *Cat.* I, 1a6-12. This definition is confirmed in several other passages. See, for instance, *Cat.* I, 3b6; *Top.* VI, 10, 148a23.

definition of 'animal' in both cases is identical; accordingly, if one is to give a definition of what it is to be an animal in the cases of 'ox' and 'man', this definition will be identical in both cases. Therefore, the definition of 'animal' in 'man is a rational animal' and in 'ox is a four-footed animal' is identical. In such a case, 'animal' is used synonymously, as it attracts exactly the same meaning in both cases.

I have already mentioned that synonymy mostly takes place between genera and their respective species.[31] Genus, therefore, is predicated of all its species in a synonymous way. The synonymous predications in the hierarchies of kinds can be found between species and their proper individuals as well.[32] The genus 'animal' is synonymously predicated of both the species 'men' and the individuals under that species, say, Callias. In this structure, not only the genus (e.g. animal) is predicated of its entire species (e.g. men, birds, dogs, etc.) but also species (e.g. men) is synonymously predicated of all of the subordinating individuals (e.g. Callias, Socrates, etc.). There is, therefore, a certain kind of transitivity of synonymous predications between hierarchies of genera, wherein genus is predicated of both many of its species and of individuals situated beneath species. The transitivity of synonymous predications between several stages of hierarchies of kinds is an important feature of synonymy, especially in building up *kata hen* relations between genera and species by virtue of which the so-called demonstrative special sciences proceed. The transitivity enables one to build up syllogisms based on the necessary synonymous relations found in between these hierarchies. As I have mentioned, Being does not suit this *kata hen* scheme since it cannot be regarded as a genus. Being, in other words, is not predicated of its instances synonymously as genus is in *kata hen* relations;

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[31] See 2.2.1. above. This is confirmed most clearly in *Top*. IV, 6, 127b5-7: 'Look and see also if the genus [τὸ γένος] fails to be synonymous [μὴ συνώνυμον] with its species [τῷ εἴδει]. For the genus is always predicated of its species synonymously [κατὰ πάντων γὰρ τῶν εἰδῶν συνωνύμως τὸ γένος κατηγορεῖται].' Additionally in *Top*. II, 2, 109b4: 'For a predicate drawn from the genus is never ascribed to the species in a derived form [παρωνύμως], but always the genera are predicated of their species synonymously [πάντα συνωνύμως τὰ γένη τῶν εἰδῶν κατηγορεῖται]; for the species take on both the name [τοὔνομα] and the account [τὸν λόγον] of their genera.' Cf. also *Top*. IV, 123a29; VII, 4, 154a16.

[32] *Topics*, VII, 4, 154a18: 'For the species is synonymous with its individuals.'

rather, it attracts different meanings in its different applications. Hence, though synonymous predication found between the genera and their respective species is sufficient for constructing so-called special sciences, it is insufficient as it stands for the science of Being.

Another feature of synonymy is that it is commensurable. The commensurability of synonyms holds that two things are comparable by means of 'more' and 'less' phrases if these two things are predicated synonymously. Aristotle explains this feature of synonymy in *Topics*:

> Moreover, see if the terms cannot be compared [συμβλητά] as more or less [μᾶλλον] or as in like degree [ὁμοίως], as in the case (e.g.) with a clear sound and a clear argument, and a sharp flavour and a sharp sound. For neither are these things said to be clear or sharp in a like degree [ὁμοίως], nor yet is the one said to be clearer or sharper than the other. Clear, then, and sharp are homonymous. For synonyms are always comparable [τὸ γάρ συνώνυμον πᾶν συμβλητόν]; for they will always hold either in like manner [ὁμοίως], or else in a greater degree [μᾶλλον] in one case.[33]

According to Aristotle, contrary to homonymous terms, synonyms are commensurable (συμβλητόν). Two terms – say, 'clear' (λευκός) in 'clear sound' (λευκὴ φωνὴ) and 'clear argument' (λευκὸν ἱμάτιον) – are used homonymously when they have the same name but different definitions. Since these two 'clears' (i.e., 'clear' in 'clear sound' and 'clear argument') have different senses, it is impossible to make a comparison between them. To put it in another way, it is impossible to say that the 'clear' in 'clear sound' is 'more clear' than the 'clear' in 'clear argument', as these two 'clears' have different definitions and senses. If, however, these terms were synonyms, then it would be possible to compare them: for instance, 'clean' in 'clean hospital' and 'clean kitchen' is used synonymously. In such a case, it is possible to compare 'kitchen' and 'hospital' in terms of being clear, and affirm that, say, a kitchen is 'more clear' than the hospital, or the hospital is 'less clear' than the kitchen.

The import of this claim is that in an intra-categorical relation, in which the genus is predicated of its species synonymously, it is possible that we construct

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[33] *Top.* I, 15, 107b13-18.

comparisons in terms of 'more' and 'less' phrases according to the common genus to which the species are synonymously predicated. In ordinary *kata hen* relations, where a genus is predicated of its species synonymously, this seems to be the only possibility. However, as I have mentioned, Being does not suit this schema for most of the time it is homonymously predicated of its instances. One might find the underlying reason for this affirmation in how in reality Aristotle conceptualizes the categories of Being. According to this line of thought, categories can be seen as the highest genera of Being.[34] Being, as Aristotle states, falls immediately into genera.[35] These genera are the highest amongst others and these are what Aristotle calls categories. Hence, in terms of commensurability, according to this schema one can observe two levels where Being as a predicate can operate. First, the predication can operate inter-categorically, that is, between several categories. Since in such cases Being is predicated of its instances homonymously, it is impossible for us to construct comparisons. For instance, we cannot say that a quality, say 'white', is more Being than a quantity like 'number', for Being does not constitute the same meaning of these two occurrences, that is predicated homonymously. Despite the fact that Being is not commensurable in the cases where it is predicated homonymously of its several instances, it is indeed possible that, in some cases, we can still affirm that it is commensurable, that is, when it is predicated synonymously to intra-categorical instances of the same category. Within instances of a single category, then, it is still possible to make comparisons by 'more' and 'less' phrases. We might turn to a passage from *Categories* in order to illustrate the point:

> Of the secondary substances [δευτέρων οὐσίων] the species is more a substance [μᾶλλον οὐσία] than the genus, since it is nearer [ἔγγιον] to the primary substance [πρώτης οὐσίας]. For if one is to say of the primary substance what it is [τί εστι], it will be more informative [γνωριμώτερον] and apt [οἰκειότερον] to give the species than the genus. For example, it would be

[34] Aristotle explicitly affirms that things belonging to different categories cannot have a common genus in *Met*. Δ, 28, 1024b12. Again, he affirms that things in the same category belong to the same genus in *Met*. Δ, 6, 1016b31, which is echoed in *Met*. I, 3, 1054b35. Categories are conceptualized as the highest genus of predication in *De An*. II, 1, 402a22. See also *An. Post*. I, 22 83b16; *Top*. I, 9, 103b20, 15, 107a3; VII, 1, 152a38; *Soph. El*. 22, 178a5.
[35] *Met*. Γ, 2, 1004a5.

> more informative to say of the primary substance what it is, it will be more informative to say of the individual man that he is a man than that he is an animal (since the one is more distinctive [ἴδιον] of the individual man while the other is more general [κοινότερον]); and more informative [γνωριμώτερον] to say of the individual tree that it is a tree than that it is a plant. Further, it is because the primary substances are subjects [ὑποκεῖσθαι] of all the other things and all other things are predicated [κατηγορεῖσθαι] of them or are in them, that they are called substances most of all [μάλιστα οὐσίαι λέγονται]. But as the primary substances [αἱ πρῶται οὐσίαι] stand to the other things, so the species stand to the genus (for the genera are predicated of the species but the species are not predicated reciprocally [ἀντιστρέφει] of the genera). Therefore for this reason too the species is more a substance [μᾶλλον οὐσία] than the genus.[36]

This passage is challenging in several ways, as it causes a great deal of debate among scholars on such issues as the difference between secondary and primary substances and issues concerning Aristotle's doctrine of predication. Obviously, these issues demand a separate discussion, which I cannot on this occasion provide. My sole aim in examining this passage is to elucidate an example that illustrates how Being can be predicated synonymously in intra-categorical relations and thus is commensurable.

Aristotle's chief aim in the above passage is to show that species is more a substance (μᾶλλον οὐσία) than a genus. While doing this, he offers two arguments; the first argument is presented in lines 2b9–15 ('For if one...') and the second is presented in lines 2b15–22 ('Further, it is because...'), both of which show that species deserves to be called more a substance than a genus.

Now, we know that an emphasized feature of synonymy is that it mostly occurs between intra-categorical relations, such as the relation between 'animal' and 'man', and it is natural for Aristotle to affirm that a man is more a substance than an animal for it is more proximate to the primary substance, e.g. Callias. We can observe a hierarchy in this structure in which several instances are connected in a *kata hen* way. In our example, the hierarchy is roughly established upon the highest genus (animal) and the lowest species (man), with the individual underneath that species (Callias). The hierarchy is already established under a single genus, which in our example is 'animal'. That genus

[36] *Cat.* 5, 2b7-22.

is predicated of all of its subordinating species and individuals synonymously.[37] These species, in turn, are predicated to the subordinating substantial individuals synonymously as well.[38] We have, therefore, a synonymous relation in this hierarchy in which commensurable individuals and species are ordered under the umbrella of a single genus. In such cases, since we have synonymous predications, it is possible to make comparisons by using the 'more' or 'less' phrases as Aristotle did in the above passage. Therefore, Aristotle is not wrong to claim that species are more substance than genera;[39] the senses of Being that correspond to genera and species are identical, that is, the accounts of Being for these terms are synonymous.

On the basis of the passages where Aristotle seems to establish degrees in Being, Shields argues that despite his declarations that Being is a CDH, at least in these passages, Being is conceptualized by Aristotle as a synonym.[40] In fact, Aristotle seems to present comparisons between different instances of Being in many places of his corpus.[41] I believe, however, that such doubts are not always well founded and, contrary to the proposal of Shields, the several occurrences of degrees of Being in Aristotle's philosophy do not at all imply that Being is synonymous. While this is not the place to argue the point, we can still forestall such an approach by bringing forth what has been actually intended in these passages. First, as I have already shown, it seems perfectly legitimate for Aristotle to establish hierarchies of Beings in passages where we encounter intra-categorical relations. Second, in some of the passages, where we encounter Aristotle constructing degrees of Being, an interpretative pattern can be constructed which enables us to deal with otherwise insoluble difficulties.

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[37] This is confirmed most clearly in *Top.* IV, 6, 127b5. Cf. IV, 123a29; VII, 4, 154a16.

[38] *Top.* VII, 4, 154a18.

[39] On the other hand, the species themselves are not more substantial than one another. This applies to substantial individuals as well: 'But of the species themselves - those which are not genera - one is no more a substance than another [οὐδὲν μᾶλλον ἕτερον ἑτερου οὐσία ἐστίν]: it is no more apt to say of the individual man that he is a man than to say of the individual horse that it is a horse. And similarly of the primary substances one is no more a substance than another [οὐδὲν μᾶλλον ἕτερον ἑτερου οὐσία ἐστίν]: the individual man is no more a substance than the individual ox.'(*Cat.* 5, 2b22). Cf. also *Cat.* 5, 3b33.

[40] Shields (1999), pp. 264-266.

[41] For which, see, *Cat.* 5, 2b7-19; 2b22; 3b35-4a9; 13, 15a4-7; *Met.* B, 5, 1002a4-8; 1002a15-18; Z, 2, 1029a6, 1029a29-30; 1030a21-22; 16, 1040b22-24; M, 2, 1077b12; N, 1, 1088a29.

Accordingly, one might argue that in these passages, Aristotle's aim is not merely to present degrees in Being but to show that there is some kind of priority in the instances of Being and that we can establish a hierarchy among these Beings in terms of these priorities. Indeed the dependency relations are capable of establishing degrees in Being in a way but this conception is unique to the case of Being and it does not demand or imply a synonymy. In these passages, therefore, Aristotle merely seeks to show that some Beings are prior to others in which it would be perverse to read these passages as tacitly allowing that Being is commensurable and therefore, conceptualized as a synonym. This interpretation is applicable to passages from Book Z (4, 1030a21) and Book N (*Met*. N, 1, 1088a24-1088b5) where Aristotle discusses the priority of substance over other categories. The priority in question does not necessitate that Aristotle should envisage a synonymous conception of Being. Similarly, in Book B Aristotle compares the ontological status of 'body', 'surface', 'line' and 'unit', which also fits the interpretation I have suggested as well, that the degrees in Being that we encounter is constructed upon the priority relations rather than the synonymous conception of Being.

It can also be claimed that Aristotle is establishing degrees in Being when he presents the priority of form over matter in Book Z.[42] Again, in this passage, Aristotle's aim is to establish the priority of form over matter, but not to maintain that matter exists less than form. Matter, in this line of argument, is posterior to form because of its indeterminate and dependent nature. It can be regarded as a mere indeterminate substratum that does not have a self-subsistent existence.

One may, however, claim that Aristotle in fact envisages a hierarchy between several instances of Being in a passage from Book M of *Metaphysics*.[43] This passage can be seen as the terminus of a series of analyses concerning the mode of Being of mathematical objects. These analyses are conducted in order to solve

[42] *Met*. Z, 3, 1029a5-30.
[43] *Met*. M, 2, 1077b12-18

a puzzle that originated in Book B, which focuses on whether numbers, lines, figures, and points are a kind of substance or not and asks whether such things are separate from sensible things or present in them.[44] The passage presents the results of Aristotle's examination of mathematical objects. It involves four significant declarations concerning mathematical objects. First (1) he declares that mathematical objects are 'not substances as bodies are'. Second (2) he maintains that mathematical objects are posterior to the sensible objects. Third, Aristotle states that (3) mathematical objects are logically prior to sensible objects. In such a conception, then, while sensible things are prior to mathematical objects ontologically, they are posterior logically.[45] Finally, (4) Aristotle asserts that mathematical objects do not have a separate existence beyond sensible objects. These four concluding remarks are the result of a series of arguments starting in the opening chapter of Book M. The first declaration (1) is particularly important in terms of the commensurability problem. Bearing in mind the indefiniteness of 'body' used in this passage, I can safely argue that this comparison does not lead to an overall synonymous conception of Being in Aristotle. To say that the objects of mathematics are not separable from sensibles may well be interpreted as affirming something about the 'mode of Being' of these objects rather than asserting something regarding their 'ontological status'. Hence, I believe Aristotle's aim in making a comparison between bodies and mathematical objects is rather to determine the ontological mode to which mathematical objects appertain rather than to establish a hierarchy in Being depending on the ontological statuses of these objects. Therefore, I believe that Aristotle's declarations in this passage do not show that he actually envisages a structure of Being that is synonymous.[46] Upon reflection, therefore, Shields seems not to be fair to Aristotle when he employs

[44] *Met*. B, 1, 996a14

[45] I shall present an explanation for these two types of priorities shortly in this chapter.

[46] Lewis (2004, pp. 22-24) attempted to solve the problem of commensurability of Being by emphasizing the 'priority' relations found between the instances discussed in these passages as well. His interpretation, however, is not sufficient to solve the problem of commensurability of Being, for, as we have seen, the priority argument is neither sufficient nor needed for *all* the passages where one may find degrees of Being simply because, as mentioned, in some of these passages the hierarchy is already established between intra-categorical relations.

the commensurability argument in order to reject the homonymy of Being in Aristotle.

This brief analysis of synonymy seems to be sufficient to establish the framework for my upcoming discussion of CDH of Being and so, I will now proceed to explicate, very briefly, what Aristotle understands by homonymy.

Aristotle describes homonymy in the first section of *Categories*: 'When things have only a name in common [ὄνομα μόνον κοινόν] and the definition of being [λόγος τῆς οὐσίας] which corresponds to the name is different [ἕτερος], they are called *homonymous*'.[47] Homonymy occurs when things share the same name. That same name, however, has different definitions in its various occurrences.

In contrast with the case of synonyms, one can observe several types of homonymy, for sometimes it is possible to find some kind of association between the definitions of homonymous terms. These several types of homonymy are determined by the level of the association between the definitions of homonymous terms. Sometimes the definitions of homonymous terms have nothing in common, while sometimes it is possible to find some kind of association between the definitions of homonymous usages of a term. In the latter cases, the definitions of homonymous terms may intersect although they do not completely overlap. If these definitions were to overlap entirely, as I have mentioned, we would have synonymy rather than homonymy.

In some homonyms, in which it is possible to find some kind of association between the definitions of homonymous terms, it is possible to observe further some kind of order in the association of the terms. Several definitions of a homonymous term, in such structures, may be ordered in terms of the referential connections found between these definitions. When, for instance, one meaning of the homonymous term is prior to the others by virtue of the fact that the other meanings are necessarily linked to that primary instance if they

[47] *Cat*. 1, 1a1.

are to be meaningful at all, we have an *ordered associated homonym*. In such structures, mostly we have a primary term to which all the other peripheral terms are necessarily linked. Homonyms with such ordered relations are called *core-dependent homonyms* (CDH). Such homonyms have several defining requirements, concerning mostly the relations between the core and the peripherals and they are the most complicated instances among all the other types of homonyms, in which several necessary conditions have to be met if the required relation is to be constructed. In terms of the aims of this thesis, these conditions must be explained in full, since Being, as we are told by Aristotle, is an instance of such homonyms, that is, it is a CDH and since, as we shall see, the problem of unity of the science of Being can only be averted by virtue of such an ordered relation that can be observed between several instances of Being. Hence, we should know initially what exactly is required in such homonyms and see if Being meets these requirements. If Being proves to be a CDH, it will then be important to determine in what conditions Being fulfils these requirements. These conditions will tell us if a theological conception of the science of Being is inconsistent with what we are told in Book Γ with respect to CDH. Hence, what I shall do first is to derive the requirements of a CDH and apply my findings to the CDH of Being, whereby I hope to show that there is nothing in such a structure that is incompatible with a theological conception of the science of Being.

2.2.4. Two Examples of CDH

In this part, I will examine two examples of CDH provided in several places of the Aristotelian corpus (i.e. health and medicine), subsequently checking their requirements as far as possible. Some scholars take these examples quite seriously, on the ground that they necessarily reveal the final thoughts of Aristotle on CDH. To this end they sometimes reconstruct the examples to make them fit Aristotle's conception of the CDH of Being.[48] I think, however, that these examples are merely rough doctrinal guides and they mostly lack the

[48] See, for instance, Shields (1999) pp. 117-118 and to a limited degree Ward (2008), pp. 91-99.

required theoretical clarity. I will not reconstruct them since I see no reason for doing this, and will content myself with what they say with respect to the CDH of Being. After all, Being is a unique case that cannot be exemplified in the fullest sense. In my opinion, therefore, what these examples say is not to be taken as a definitive description of every aspect of the CDH of Being. Rather, as I have mentioned, they were meant to introduce the reader or listener to the special case of Being but they cannot be expected to be exactly like the case of Being because the case of Being is unique.

'Health' is an instance of CDH, for it is possible to observe an order in several usages of this term. In the CDH of 'health' the term has several secondary instances, all of which are tied to a single 'core' item that is prior to all the other usages of the term:

> There are many senses in which a thing may said to 'be' [τὸ δὲ λέγεται μὲν πολλαχῶς], but they are related to one central point [πρὸς ἕν], one definite kind of thing, and are not homonymous. Everything which is healthy [ὑγιεινὸν] is related to health [πρὸς ὑγίειαν], one thing in the sense that it preserves [φυλάττειν] health, another in the sense that it produces [ποιεῖν] it, another in the sense that it is a symptom [σημεῖον] of health, another because it is capable [δεκτικὸν] of it…[49]

The passage tells us that several secondary instances are linked to the primary instance of health in several ways. Over against the homonymous terms that have no order in their several usages and the homonyms in which several meanings of a term intersect but nevertheless have no order in the organization of these meanings, one can observe a certain order in several usages of the term 'health', in which some non-core instances are tied to a core instance in several ways. This shows that the term 'health' is a CDH for several senses of this term have a definite organization in the way that all of the secondary instances are linked to one definite primary 'core', namely, 'health', around which they are clustered.

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[49] *Met*. Γ, 2, 1003a33. The example of health presented in Book Γ is in its most complete form. The other occurrences lack some of the secondary instances enumerated in the text of Book Γ. The text of *Topics* (I, 15, 106b34), for instance, involves only 'productive of health' (ποιεῖν), 'preservation of health' (φυλάττειν) and 'indicative of health' (σημεῖον) whereas Book K (1061a5) involves solely 'productive of health' (ποιεῖν) and 'indicative of health' (σημεῖον).

In the above passage, four peripheral elements are listed. The first of these instances is the preservation (φυλάττειν) of health; a thing can be called 'healthy' because it 'preserves' health. For instance, exercising, avoiding stress, quitting smoking, or moderate drinking and eating, can all be called 'healthy', since these activities 'preserve' health. They are called 'healthy' in virtue of their connection with 'health', without which they do not have any meaning at all. The second peripheral instance listed in the passage is 'production' (ποιεῖν). Several peripheral instances, for instance, diet or medical treatment, are called 'healthy' for they all 'produce' health. Thirdly, we call a 'symptom' (σημεῖον) 'healthy' by referring to the term 'health'. For instance, we call some state of a body; say strength, 'healthy' by virtue of the fact that it is a symptom of health. Finally, a thing can be called healthy by virtue of being capable (δεκτικὸν) of it. A physical part of a body, say muscles, can be called 'healthy', for the reason that they are capable of receiving health.

Let me now turn to the second example, namely, the example of 'medical' (ἰατρικὸν). Similarly to 'health', the term 'medical' is an ordered homonym, the senses of which can be organized by virtue of their reference to a primary sense of the term. The example of medical art occurs in several places in the Aristotelian corpus.[50] In Book Γ Aristotle presents it as:

> And that which is medical [ἰατρικὸν] is relative to medical art [πρὸς ἰατρικήν], one thing in the sense that it possesses [ἔχειν] it, another in the sense that it is naturally adapted [εὐφυὲς] to it, another in the sense that it is a function [ἔργον] of the medical art. And we shall find other words used similarly to these.[51]

We are informed of three secondary instances of medical art in this passage, with a note that it is possible to add more instances into the example. One may trace these other instances in several other passages where this example occurs. Book Z, for instance, pronounces three instances; 'body' (σῶμα)[52], 'operation'

[50] See *Met*. Γ, 2, 1003b1; Z, 4, 1030a34; K, 3, 1060b37-1061a5; *EE* VII, 2, 1236a19.
[51] *Met*. Γ, 2, 1003b1.
[52] Ross renders 'σῶμα' quite inaccurately as 'patient', which involves a hidden interpretation that limits the reader into the scope of a single candidate with respect to the possible additional nominees for what is meant by this ambiguous term. Body, announced in this text, may well be the body of the physician or the body of the patient.

(or 'function') (ἔργον) and 'instrument' (σκεῦος),[53] where 'instrument' and 'operation' intersect with the above list from Book Γ. The other instance, namely, body, is unique in this list. The two examples in Book K[54] are 'prescription' (λόγος) and 'scalpel' (μαχαίριον), which can be covered by the cumulative result that we may gain from the passage of Book Γ and Book Z, since 'prescription' (λόγος) can be regarded as a function (ἔργον) of medical art (pronounced in Book Γ) and 'scalpel' (μαχαίριον) can be regarded as an instrument (σκεῦος) of medical art (pronounced in Book Z). In *Eudemian Ethics*, Aristotle pronounces on 'soul' (ψυχή), 'body' (σῶμα) and 'instrument' (ὄργανον).[55] 'Soul' is particularly important in this enumeration and we shall soon see why. The 'body' and 'instrument' can be regarded as a repetition since they are involved in the previous examples. 'Soul' can also be involved in the above examples but with an interpretative reservation, as we shall see. Therefore, the cumulative result with respect to secondary instances of medical art is as follows:

1. that which 'possesses' (ἔχειν) (Book Γ) or 'soul' (ψυχή) (*Eudemian Ethics*)[56]

2. that which is 'naturally adapted to' (εὐφυές) (Book Γ)

3. 'function' or 'operation' (ἔργον) (Book Γ & Z), and 'prescription' (λόγος) (Book K)

4. 'body' (σῶμα) (Book Z & *Eudemian Ethics*)

5. 'instrument' (ὄργανον or σκεῦος) (Book Z & *Eudemian Ethics*) and 'scalpel' (μαχαίριον) (Book K).[57]

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[53] *Met*. Z, 4, 1030b2.
[54] See *Met*. K, 3, 1060b37-1061a5.
[55] *EE* VII, 2, 1236a19. I believe there is no obstacle to rendering both 'σκεῦος' (of Book Z) and 'ὄργανον' (of *Eudemian Ethics*) as 'instrument' (though the former is used mostly in the context of military equipment).
[56] I will explain why 'soul' should be correlated to 'possession' shortly.
[57] One may regard 'instrument' (ὄργανον or σκεῦος) and 'scalpel' (μαχαίριον) as special cases of 'naturally adapted to' (εὐφυὲς), but, I believe, since these are not 'natural' products (rather they are artificial products designed by the necessities of medical art) they should be listed in a separate classification.

The example shows that 'medical art' is a CDH because several senses of this term can be organized in virtue of referring to a primary term. 'Physician', for instance, can be regarded as 'medical' because he who 'possesses' (ἔχειν) the requirements of medical art is called a physician. The knowledge of 'medical art' is possessed by his/her 'soul' by virtue of which he operates and acts medically. Notably, what possesses 'medical art', in this conception, is the 'soul' of the physician. This interpretation seems to be the most accurate one, not only because it is coherent with Aristotle's general conception of soul as the possessor of a kind of knowledge that is medical, but also because 'soul' (ψυχή) is explicitly pronounced as one of the secondary instances of medical art in *Eudemian Ethics* as well.

Likewise, we call things 'medical' that are 'naturally adapted to' (εὐφυὲς) medical art. What is in fact intended by 'naturally adapted to' is not immediately plain, however, we may take it to mean 'the body of a patient'. In the testimony of Book Z and *Eudemian Ethics*, this seems to be fair enough, since these texts enumerate 'body' (σῶμα) as one of the secondary instances of medical art.

Additionally, we use 'medical' to refer to operations and prescriptions, for they are all means by which medical art functions. Similarly, 'body' (σῶμα), and 'instrument' (ὄργανον or σκεῦος) such as 'scalpel' (μαχαίριον) may well be called 'medical' in virtue of their reference to medical art.

These two examples show that it is possible to observe a certain order in some of the homonyms. In such cases, one can observe ordered relations between peripheral terms and a primary instance. I will now further expose these ordered relations reflected between secondary instances of a homonymous term and its primary instance.

2.2.5. Requirements of CDH

So far we have seen that CDH is supposed to solve the problem of the unity of the science of Being by virtue of providing an alternative for a *kata hen* relation. Being does not constitute a genus, for which reason it is impossible to observe the necessary relations in the *kata hen* relations found between genera and their respective species in Being. The necessary relations must be established, however, if a science is to operate properly. Hence, CDH must provide these necessary relations in one way or another so the science of Being can be established.

In every CDH, we normally have a paradigm case, a 'core' item to which several peripheral items are connected. The most important aspect of such constructions is the actual relation between the core and the peripherals. The relation between core and peripherals must prove to be necessary so that an explanatory pattern can be structured, which paves the way for a study of peripherals through the investigation of the core item.

I believe it is possible to approach the nature of the relations found between the instances of CDH (i.e. the core and the peripherals) in two ways. One of these ways, which is more orthodox among contemporary scholars such as Owen, is to investigate the reasons why the peripheral instances are *called* medical or healthy by virtue of their connection to the core item. This linguistic constitution of CDH, however, seems to me to be totally un-Aristotelian, as Aristotle is not particularly interested in the reasons for *calling* peripheral instances healthy, medical or Beings; what he is interested in is *why* all these peripheral instances *are* medical or healthy or Beings. The Aristotelian question, therefore, concentrates on the reasons why the peripheral instances *are* in reality healthy, medical or Beings rather than the reasons for these peripherals to be *called* healthy, medical or Being. Hence, what we need is an explanation provided by CDH with regard to the peripherals *being* healthy, medical or Beings.

If the question is why these peripherals *are* healthy or medical or what makes them Beings then the Aristotelian answer is that they stand in a certain relation to the core item. It seems to me that the question that attracts Aristotle's attention is very similar to that of Plato, but for good reason the Platonic answer does not seem to satisfy Aristotle. According to Plato, the reason for several things being healthy, medical or Beings must be searched for in their participation in forms. This explanation, however, cannot satisfy Aristotle, as in Plato's theory health attracts exactly the same meaning in all of its occurrences, that is, it is synonymous with all of its manifestations. This, however, is exactly the position that Aristotle wants to distance himself from for certain epistemological reasons explained earlier, namely that in such a construction the meaning of the core item can be studied at once, which would yield a single gigantic science of Being, leaving no room for the other sciences because of its vastness. Aristotle, on the contrary, thinks Being is homonymous and emphasises the necessary relations between the core and the peripherals to establish a unitary science through CDH even though there is no genus and species whereby one can establish necessary relations between them as in ordinary *kata hen* relations.

Aristotle's aim, therefore, is marked by his enterprise in finding an alternative for *kata hen* relations to arrive at a unified science of Being even though Being is πολλαχῶς λεγόμενον and is not a genus. This requires establishment of the necessary relations between the core item and peripheral instances in the CDH of Being. One might naturally expect to find some explanatory patterns in a given CDH. Since, as we are told in Book A,[58] the explanatory patterns are established through certain causal relations, we expect to find some causal relations between the instances of CDH, as otherwise no knowledge would accrue from the peculiar relations between the instances of CDH. This amounts to saying that there must be causal connections between the instances of CDH. This same explanatory pattern also requires that we find epistemological priority relations in a CDH, whereby some element of a CDH is authorised to

[58] *Met.* A, 1, 981a26. See also *An. Post.* I, 13.

explain the other instances. We will see that the paradigm case or the core item is most suitable for such a role and that through knowing this item one comes to know the peripheral instances of CDH. Finally, given Aristotle's general inclinations,[59] we may expect that what is prior in knowledge should be prior in existence as well and so we may expect, in a given CDH, to find ontological dependency relations.

In sum, in a given CDH, we may expect to find three fundamental relations, upon which such a relation is constructed. First, there must be causal connections whereby an explanation becomes possible. I will call these relations 'causal connectedness'. Second, there must be explanatory priority between the instances of a CDH. We might call this 'logical dependence'. Finally, there must be existential priority relations between the instances of CDH, or 'ontological dependence'. Upon these necessary relations a CDH is formed whereby the study of a core item leads to knowledge of the peripheral items. These necessary relations are capable of building up sufficient means for a single inquiry into an homonymous item to become possible beyond the ordinary *kata hen* relations.

2.2.6. Causal Connectedness

In a CDH, it is possible to observe causal relations between the instances. In the examples of health and medicine, as we will see, there are diffused sets of causes inasmuch that sometimes one kind of cause (e.g. final cause) operates between the instances and sometimes another (e.g. efficient cause). In the light of the required explanatory patterns, we may reasonably expect that the core item should be the cause of the peripherals, but, as we will see from the examples, this is not always the case. The examples, although lacking the required theoretical clarity, are still helpful in detecting the causal relations.

[59] This utterance is extremely ambiguous but we will have the chance to observe in close detail the traces of such an inclination.

They are chosen as general doctrinal guides to the CDH of Being rather than to designate strictly what ought to be the case in the CDH of Being.

In the context of Aristotle's general understanding of causality, it would be reasonable to ask whether the causal relations in CDH, what I wish to call the requirement of causal connectedness, fits with Aristotle's four-cause theory in which formal, final, efficient and material causes are articulated.

It is indeed possible that, one may distinguish some of the standard modes of causation in a CDH by examining the examples given to illustrate this kind of relation. In such a structure, the peripheral instances of a CDH are connected to the primary instance in one of the four standard modes of causation. To illustrate the point, let me now turn to Aristotle's two examples, namely, health and medicine, in order to clarify how the standard modes of causation can be employed in a CDH.

A rough examination of the peripheral instances in the two examples may be of help to take some steps towards solving the puzzles I have raised so far. Recall that there were four non-core elements listed in the example of health. We have seen that one of these instances was the preservation (φυλάττειν) of health, examples of which are exercising, avoiding stress, quitting smoking, or moderate drinking. It is possible to find one of the standard modes of causation between these non-core items and health. Indeed, they can all be regarded as the efficient[60] causes of health. There is a certain asymmetry in the causal relation between these non-core items and health. The causal direction in this exemplary case is directed from a peripheral element (e.g. moderate drinking) to the primary instance, since the former is the efficient cause of the latter (health) and not vice versa. In the 'production (ποιεῖν) of health' (e.g. diet or medical treatment) one can observe similar causal relations. These instances that produce health can be regarded as the efficient causes of health as well. Once again, the causal direction is asymmetrical, where non-core items are the

[60] Though many of them are not sufficient causes.

efficient causes of the core item and not vice versa. The third non-core instance enumerated in the example of health was that a 'symptom' (σημεῖον), such as a state of a body, say strength, is 'healthy' by virtue of the necessary reference it makes to the core item of health. This case is particularly interesting, not because of the mode of causation it involves, which is not different from the aforementioned non-core items, i.e., the efficient cause, but because the causal direction in this case is reversed. It is the health that is responsible for the symptom of health, say, strength of a body, but not vice versa.

One may find the fourth non-core item in the example of health particularly interesting for it involves a mode of causation different from the above instances. In this case, a thing is called healthy by virtue of being capable (δεκτικὸν) of it. A physical part of a body, say muscles, can be called healthy, for the reason that they are capable of receiving health. Contrary to the above cases, where the efficient cause is implied, in this case the material cause is pronounced, for what is capable of receiving health can be seen as the basic substratum of health corresponding to the material cause. The causal direction, however, is similar to the first and second instances where the peripheral element is the material cause of the core item.

There are several conclusions that can be drawn from this brief examination of the example of health. First, we have understood that Aristotle indeed envisages a kind of causal relation between the instances of CDH and that this relation is in harmony with his four-cause theory. The example yields, however, an unsatisfactory picture for it implicitly implies solely two of the four standard modes of causation, namely, the efficient and the material causes, leaving no room for positive grounds of interpretation whether or not we are permitted to include the two other causes, namely, the final and formal cause, in the ambiguous picture it draws. The non-core instances involved in this example seem to be arbitrarily chosen[61] in terms of their causal links to the primary

[61] This may be prejudicially confirmed by the fact that Aristotle does not enumerate every secondary instance listed in the text of Γ in other passages.

instance, and it looks as though we could attach additional secondary instances, and might complete what is missing in the general scheme, through some kind of construction of more exemplary cases so as to include the two other causes (i.e., formal and final causes) into the structure. It is still possible, however, to make some progress, for the example of health most certainly shows us the fact that one can observe standard modes of causation in a given CDH.

Additionally, the example has a further shortcoming, for the reason that it does not shed light on the direction of the causal link between non-core items and the core item. In three of the four cases, the causal direction is from the non-core instances to the core instance, whereas in one instance it is reversed. This hinders any precise conclusion with respect to the causal direction in a given CDH, which will be of cardinal significance in the case of Being.

The shortcomings of the example of health might be averted to a degree if we are to examine Aristotle's second example, namely, the example of medicine. Let us start with the first non-core instance enumerated in this example, namely, the 'possession' (ἔχειν) of medical art. I have already mentioned that a 'physician' can be regarded as an example for this category. After all we might call a 'physician' one who possesses the knowledge of medical art. In accordance with Aristotle's epistemological claims, this knowledge should rest in a physician's soul,[62] whereby he or she operates and acts medically. A soul that possesses the knowledge of medical art is the actual formal reason that lies behind the physician's activities. The latter, however, can be regarded as the efficient cause of medical art. The external product coming out of the knowledge of medical art is health, which is attained by the implantation of the form resting in the physician's soul. Hence, the knowledge itself, resting in the physician's soul, can be regarded as the form of the medical art simply because medical art may be seen as a set of procedures and knowledge that can be

[62] See *De An*. III, 4.

actualized by the physician through his soul, which possesses this knowledge.[63] The example somehow seems to involve both of the causes and precisely which of these causes is indeed meant by Aristotle is a matter of speculation. The causal direction in the case of 'possession' operates from the non-core item to the core item, as the 'soul' of a physician can be regarded as the formal cause of medical art.[64]

Another instance of medical art, namely that a thing is 'medical' by virtue of being 'naturally adapted to it' (εὐφυὲς), can also be linked to the primary instance in one of the four standard modes of causation, but, as I have mentioned, what is meant by 'naturally adapted to' is not at all plain in the first instance. I have implied that this utterance might be interpreted to denote a body that is suitable for accepting the act of medical art, that is, the body of a

[63] I do not believe that Julie Ward has got to grips with all the points that propelled Aristotle's thinking. She is of the opinion that the 'medical mind' or 'soul' is linked to the primary instance of medical art by virtue of being the efficient cause of it (Ward (2008), p. 93). She opposes the view that CDH involves formal causal links, as this will cause synonymy (ibid., pp. 81-86). Despite the fact that there is a point to this objection, I think that in this form it goes too far. Although this is not the place to argue the point, I think one may reply to this objection by referring to a similar case of sculpture and sculptor. What the sculptor does is to implant a previously held knowledge (i.e., form), residing in his or her soul, in a stone, which is capable of receiving that form. The knowledge of a sculptor is what makes the sculpture possible and for this reason one may indeed argue that it is the efficient cause of sculpture. In fact, only the sculptor is the efficient cause of the sculpture, and the knowledge of the art of sculpture is not the efficient cause but the formal cause residing in the sculptor's soul, which actually makes it possible to generate a sculpture by implantation of the form in a material body. When a sculpture is made, the form of the sculpture and form of the sculptor are differentiated and cannot be regarded as synonymous elements. The reason I offer the interpretation I propose is that it enables me to unify the passages of Book Γ and *Eudemian Ethics*. Since the physician is not explicitly cited in Book Γ – rather, the term 'possession' (ἔχειν) is used – and since *Eudemian Ethics* explicitly cites 'soul' as one of the secondary instances of the medical art, it would not be perverse to combine these passages and interpret 'possession' as what possesses the knowledge of medical art, which, based on the epistemological reasons I have proposed, can be nothing but a physician's soul. Therefore, in this interpretation, it is highly possible that instead of the physician, the soul is intended as regards to the possession of medical art. If, indeed, soul is meant in this passage, then the causal linkage between the primary instance of medical art and 'possession' is formal in nature. If, however, this interpretation is not accepted, this will not show that formal cause is to be excluded from the realm of CDH since, in the testimony of *Eudemian Ethics*, one can insist that 'soul' as a secondary instance of medical art should be regarded as the formal cause of medical art. In this case, 'possession' can be regarded as the efficient cause of medical art, as Ward suggests but, again, the formal cause is not excluded from CDH on the basis of the text of *Eudemian Ethics*, which cites 'soul' as one of the secondary instances of medical art. In any case, whether we combine or differentiate the passages of Book Γ and *Eudemian Ethics*, it will not affect my overall argument in terms of the causal structure of CDH. (For the inclusion of formal cause in CDH, see also Shields (1999), pp. 114-118.)

[64] The causal direction would not change if 'possession' were regarded as the efficient cause of the medical art.

patient. A body that is capable of receiving medical art can be regarded as the material cause, just as, in the case of sculpture and art of sculpting, where a stone is the matter of the art of sculpting performed by the sculptor, who is the efficient cause, it is his knowledge of the art of sculpture residing in his soul that acts as the formal cause.

Quite straightforwardly, one can admit that the third instance of medical art, where 'function', 'operation' (ἔργον) and 'prescription' (λόγος) are mentioned, the efficient cause is implied, for all of these instances can be regarded as means used by medical art in its operations. Similarly to other cases, the causal direction in these instances is directed towards medical art from the peripheral instance.

Another secondary instance of medical art was 'body' (σῶμα). As mentioned earlier, this can be regarded as the material cause of medical art, since a 'body' can be counted as a substratum on which medical art operates. The process of healing operates through the physician focusing on the body of a patient that has the capability to receive what the physician implants by virtue of his knowledge of medical art.

Finally, an 'instrument' (ὄργανον or σκεῦος), such as a 'scalpel' (μαχαίριον), is called 'medical' and the relation between a medical instrument and medical art matches one of the four standard modes of causation as well, namely, the efficient cause. An instrument is related to the operational processes of medical art that can be regarded as the proper function of medical art and therefore can be counted as the efficient cause of medical art. The causal direction in this instance is towards the core item, as it is in the previous instances.

The example of medical art paves the way for an assessment through which one can place causal analysis in CDH, yet, I believe, as in the example of health, it is insufficient for a conclusive statement on which of the causes should be involved in the relation between primary and secondary instances, nor does it

decisively inform us about the causal direction of the relation found in between these instances. Nevertheless, the example has revealed an important step in terms of the causes involved in the schema of CDH by virtue of engaging the formal cause into the picture.

Although the two examples are insufficient to present a detailed picture of CDH, they do establish the basic structural framework necessary for the CDH of Being. These examples involve three of the four standard modes of causation, namely, formal, efficient and material causes. Both of these examples advise us to trace causal relations in a given CDH.

These examples, although they seem to lack the required theoretical clarity, constitute significant progress on Aristotle's part, especially in terms of the *aporia* I presented at the beginning of this chapter concerning the unity of the science of Being. Taking the lead from these examples, we have understood that some homonyms are ordered in such a way that they involve necessary causal relations on the basis of which one can carry out an inquiry into several instances of an homonymous term through a central item, which in turn paves the way for a unified investigation of things that nevertheless initially seem to be barely grasped by a single inquiry. Hence, beyond ordinary *kata hen* relations we now have another framework of relations that involves necessary connections paving the way for a science that can operate through these necessary relations just like the sciences based on ordinary *kata hen* relations.

Causal connectedness, however, is not the only relation that can be encountered between the instances of CDH. We have yet another relation that concentrates on the definitional ties between the instances of CDH and I will now proceed to explain such relations.

2.2.7. Logical Dependence

I have already mentioned that for the required explanatory patterns, there must not only be causal relations in a given CDH but also epistemological priority relations. These relations pave the way for establishing an explanatory pattern whereby several peripheral homonymous instances can be studied through a core item that is epistemologically prior. One might observe such relations in the instances of CDH by looking closely to the examples of health and medicine. These examples show that Aristotle presumes a form of priority, in which the definitional relations between the instances of CDH can be brought to the fore. If one examines the examples closely, one will find that there seems to be an essential reference between the secondary instances and the primary instance. Indeed, the accounts of all of the derived forms of health can only be constructed by means of a necessary reference to the core item – i.e., health. If, for instance, we were to describe any means by which we preserve health, such as exercising, avoiding stress, quitting smoking, or drinking in moderation, we would immediately be referring to health.[65] Similarly, diet, medical treatment or any sort of action that aims to produce health can be defined by virtue of a necessary reference to the core item – i.e., health. In these cases, therefore, the definitions of peripheral instances involve an essential reference to the core item without which they could not be defined. The core item, accordingly, is logically prior to the non-core peripheral instances.

The same relation can be observed in the example of medicine. If, for instance, we were to define 'physician', our formula would involve a reference to medical art. Indeed, a 'physician' can properly be defined as one who possesses medical art. In the example of medicine, one can observe similar references to the core item in the definitions of other non-core items as well. An 'operation' and an 'instrument', such as 'scalpel', can only be defined by virtue of a necessary reference to medical art. The core item in the example of medical (i.e., medical art), therefore is logically prior to all the other non-core instances.

[65] One might in fact find a way to define these instances without referring to the core instance of health. Aristotle, however, seems to find necessary relations between the peripheral instances and the core instance of health. His sole aim, in this example, is to prepare the readers or listeners to the distinctive case of Being, in which the requirement of logical dependence can clearly be observed.

In logical dependence one concentrates on the definitions of the secondary instances and affirms that these definitions can be formed only if their essences contain the necessary reference to primary instance. The referential relation between non-core items and the core item is varied, preventing the definitions of peripherals being the same. In other words, there cannot be a meaning common to all of the peripherals because they have different relations to the core.

In this conception, the core item acts in the same way as the basic genus of the standard definition. This amounts to saying that the role of the core item in a logical dependence is very similar to that of the role of genus in the formation of regular definitions. As with genus, the core item in logical dependence produces a common nature to which all other derived instances must refer in building up their essences. Accordingly, it is possible to affirm that Aristotle's philosophy allows two basic ways of building up definitions. One is constructed upon the relations between genera and their respective species. The other is established by virtue of a necessary reference to a common principal term, as in the above case of 'health'. In both cases, there is a common nature by virtue of which several instances are defined; in a regular definition, the possibility of constructing the formula lies in the *kata hen* relation found between genera and their respective species, whereas in logical dependence a definition is produced upon the necessary referential relations in a *pros hen* way, where non-core items are linked to a primary core item. In ordinary definitions, the relation between genera and their respective species is built upon the close system of synonymous predications found between hierarchies of kinds, in which differentia play the crucial role in the formation of classifications upon which one arrives at a proper definition of each species. In logical dependence, however, the common nature with which all other derived forms are connected in order to establish their essences is predicated homonymously. Logical dependence, therefore, establishes the grounds for a certain type of association

between homonymous uses of a term by way of clarifying the common referential point to which all other homonymous uses of a term refer.

2.2.8. Ontological Dependence

Now, I would like to turn my attention to another relation found between the core and the peripheral terms of a CDH. This is what I wish to call ontological dependence.

Ontological dependence rests upon the priority relations between instances of a CDH where several peripheral manifestations of a homonymous term are ontologically dependent on a primary instance, without which the peripherals cannot exist. Before proceeding further into the details of such dependence, I find it helpful to examine what is meant by the term 'prior' in Aristotelian doctrine since this term is itself homonymous and therefore has many senses.

One thing can be prior to another in different ways and it is important to determine which of these priorities is meant in ontological dependence. If we investigate closely the passages where Aristotle enumerates several senses of priority, we can detect four basic senses in which this term may be utilized.[66] These four senses are as follows. The first is priority in time, whereby something happens before another thing, i.e., when one thing is older. For example, the Trojan war is prior to the Persian war in the sense that the former happened before the latter.[67] Second, things may be prior in existence,[68] which is the case when things can be without other things, whereas the other things cannot be without *them*. Aristotle refers to numbers while illustrating this kind

[66] It is not possible to go into all the possible aspects of Aristotle's discussion of priority in the limits of this text (on forms of priority, see Cleary 1988). In the present discussion, questions such as whether all the enumerations of several senses of priority are in harmony with each other and whether these priorities can be reduced to a single sense of priority will remain unresolved. It should be noted, however, that all of the passages reflect more or less the same conception of ontological priority, which is the basic target of my present discussion.

[67] *Met*. Δ, 11, 1018b15.

[68] This priority is also called priority in nature or substance; see *Cat*. 12, 14b13; *Met*. Δ, 11, 1019a2.

of priority;[69] 'one' is prior to 'two' in the sense that if there are two it follows at once that there is one, whereas if there is one there are not necessarily two. Third, one thing can be prior to another in knowledge. This sense of priority emerges when knowledge of a thing comes before and has certain dominance over another thing. For instance, the knowledge of any subject, say mankind, is prior to the knowledge of the attributes predicated on that subject (e.g. quality, quantity, etc.) since only the knowledge of the subject itself, rather than its attributes, deserves to be called genuine knowledge of that subject.[70] Finally, one thing can be called prior to another in definition. Accordingly, x may be called prior to y if the definition of y is conditional upon the definition of x. Substance is prior to its attributes in this sense, since the definition of each attribute necessarily refers to substance. This sense of priority, as one might observe, corresponds to logical dependence, which I have already discussed. We will later see in chapter IV that it is possible to identify definitional priority with priority in knowledge. These two priorities are the same as what I have called logical priority. But let me now turn to the second kind of the priorities enumerated so far for this reflects in the fullest sense what I wish to call ontological dependence.

Of these priorities, the second one, namely, priority in existence, can be used in order to characterize ontological dependence. Accordingly, if x is ontologically prior to y, then y exists only if x exists but not vice versa. In such a structure, y is ontologically dependent on x since y cannot exist without x, whereas x can exist without y. Hence, ontological priority is an asymmetric relation working only in one direction, in which the sequence of the existence of x and y cannot be reversed. In the first analysis, then, ontological dependence is structured upon the independency of x since the existence of x is independent of the existence of y but not vice versa.

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[69] *Cat*. 12, 14a30; cf. *Phys*. III, 7, 207b8-10
[70] *Met*. Z, 1, 1028b1.

Two formulations of ontological dependence on the basis of the Aristotelian texts are possible. They are distinguished by virtue of the causal relations found between the core item and the peripherals. In what follows, I will inquire into these two types of ontological dependence and attempt to reach legitimate formulations.

I have already mentioned that among the senses of priority the second one captures a kind of ontological dependence. We may utilise this to achieve a first kind of ontological dependence that can be found between the core and the peripheral instances of a CDH. We might simply call this 'ontological dependence' (OD), which, based on what Aristotle states as the second form of priority, can be formulated thus:

OD: y is ontologically dependent on x iff x can exist without y but not vice versa.

What OD tells us is that it is simply not possible to postulate the existence of y without the existence of x. Let me note at the outset that OD can work only if we have efficient causality operating between the instances of CDH. We may illustrate this with an example from the natural development of animals. For instance, the final cause of 'this infant' can rightly be affirmed as 'this adult' simply because this infant is *for the sake of* this adult. Accordingly, becoming an adult can be seen as the ultimate terminus – for that matter the final cause - of an infant. Now, the actual adult that results from an infant's proper natural development does not exist *before* the infant. It is the goal to be achieved and actualised by the infant. In this case, we do not have an OD, as we cannot affirm that the actual adult exists without the infant.

Now, let us modify the example in such a way that we have an efficient cause. This particular adult (i.e. the father) can be seen as the efficient cause of this particular infant. We should therefore first affirm the existence of the father to have an infant. In such a case, that is, in cases where efficient causality is on the

agenda, we have an OD simply because it would be impossible to have this child if we did not have primarily the existence of the father. Hence, we may say that the infant is ontologically dependent on the father, as the infant cannot exist without the father but not vice versa.

Whenever we have an efficient causality between the instances of CDH we have the chance to observe OD. For instance, in the example of health, the third non-core instance enumerated was that a 'symptom' (σημεῖον), such as a state of the body, say strength, is 'healthy' by virtue of the necessary reference it makes to the core item of health. In this case, 'health' is responsible for the symptom of health, e.g. strength of a body. In such a case, we can observe OD between the core, i.e. 'health' and the peripheral 'symptom of health' since it is impossible for strength of a body to exist without the initial existence of health.

OD, however, reflects only one aspect of ontological dependence since it barely indicates the relation between the ontologically independent x and the ontologically dependent y, as it fails to give information concerning the nature of the relation between the instances of ontological dependence.

On the basis of the passages, another version of ontological dependence can in fact be constructed to shed light on the nature of the relation between instances of ontological dependence so an explanatory pattern can be established among the instances of CDH. In *Categories*, after announcing that there are only four ways in which one thing is called prior to another,[71] Aristotle adds another sense of 'prior':

> There are, then, this many ways of speaking of the prior. There would seem, however, to be another manner of priority besides those mentioned [παρὰ τοὺς εἰρημένους]. For of things which reciprocate [ἀντιστρεφόντων] as to implication of existence [κατὰ τὴν τοῦ εἶναι], that which is some way the

[71] 'Πρότερον ἕτερον ἑτέρου λέγεται τετραχῶς' *Cat*. 12, 14a26.

> cause [τὸ αἴτιον] of the other's existence [εἶναι] might reasonably be called prior by nature [πρότερον εἰκότως φύσει].[72]

On the basis of this passage, besides ontological dependence we can construct another formulation. We might straightforwardly call this 'causal dependence' (CD), which can be formulated thus:

CD: y is ontologically dependent on x iff x is the cause of the existence of y but not vice versa.

CD gives clues to the nature of the existential ties by affirming that x is the cause of the existence of y. The relation in CD, therefore, is existentially causal, where the independent instance is causally responsible for the existence of the ontologically dependent instance. Therefore, contrary to what we encountered in the presentation of OD, the relation between the instances of ontological dependence no longer remains unarticulated in this version of ontological dependence. Henceforth, the existential causal relation in CD allows for an explanatory pattern in which the existence of ontologically dependent instances can be explained by virtue of the existence of the primary instance.

CD is not limited to efficient causality as OD was, since it is possible to affirm that one thing is responsible for the existence of another by being the final cause of it. In the example of health, for instance, a peripheral instance, say, 'medical treatment' is called 'healthy' by virtue of 'health' as the core item to which it is connected. In this case, although 'health' can be seen as the final cause of the 'medical treatment', it is still possible to affirm that the reason for the existence of a 'medical treatment' is 'health'. Likewise, health can be seen as the efficient cause of the 'symptom of health'. Now, what is actually responsible for the existence of symptom of health is the health itself. It is, therefore, possible to observe an ontological dependence relation between these instances. CD, therefore, gives a satisfactory explanation of how ontologically dependent

[72] *Cat*. 12, 14b10-12. Note that, in Book Δ of *Metaphysics* (1019a2-3), where Aristotle examines the senses of priority, he only states what I have called OD without, however, articulating this new version.

instances exist by virtue of establishing a causal relation between these instances and ontologically independent instances.

While discussing causal connectedness I mentioned that in a CDH there must be causal relations leading to the establishment of an explanatory pattern. This amounts to saying that there must be causal relation between the core and the peripherals in such a way that the core – acting as one of the standard modes of causation - *explains* the peripherals. Against this backdrop, we may then shape the general outlook of ontological dependence that can be found between the instances of CDH. Whenever we can postulate the core item as the proper reason for the existence of the peripheral instances we have causal dependence (CD). In addition to this, however, only in the cases in which we can formulate the core as the efficient cause of the peripherals, then, besides CD we have ontological dependence (OD).

We have seen that in CDH, we have causal, ontological and definitional ties between instances of a homonymous term. CDH is constructed upon all of these ties, employing all of them simultaneously in order to establish the grounds for unity between clusters of homonymous meanings through the necessary relations between central and peripheral terms. If, however, Aristotle argues for the unity of the science of Being through CDH – and we already know he should, for the very fact that he has shown that Being is not a genus and therefore the science that concerns itself primarily with Being cannot operate upon the ordinary *kata hen* relations – these features should be fulfilled by the conception of Being Aristotle has in mind. In the next part, I will accordingly examine how the schema of CDH pictured so far fits the case of Being. While doing this, more significantly, I will examine whether this conception of CDH that stands out in Book Γ with its three features is said to be compatible with the theological conception of the science of Being.

2.3. Being and Core-Dependent Homonymy

The theoretical outlook of Aristotle's declarations on science and knowledge provides a clear backdrop against which the import of Aristotle's conception of CDH may be gauged. Having presented sufficient evidence to show that Being does not constitute a genus, Aristotle falls into an *aporia* concerning the unity of the science of Being, from which he cannot escape by the ordinary *kata hen* relations upon which the so-called special sciences are constructed. The *aporia* into which Aristotle falls requires that he finds another way beyond the ordinary *kata hen* relations to provide unity for the science of Being. This constitutes the motivation behind Aristotle's presentation of Being as a CDH. Aristotle, therefore, evidently has a definite purpose when he declares in the second chapter of Book Γ that, just like the terms 'health' and 'medical', Being is a *pros hen* homonym, namely that the several manifestations of Being constitute a CDH:

> So, too, there are many senses in which a thing is said to be, but all refer to one starting-point (πρὸς μίαν ἀρχήν); some things are said to be (ὄντα λέγεται) because they are substances (οὐσίαι), others because they are affections of substance (πάθη οὐσίας), others because they are process towards substance (ὁδὸς εἰς οὐσίαν), or destructions (φθοραὶ) or privations (στερήσεις) or qualities (ποιότητες) of substance, or productive (ποιητικὰ) or generative (γεννητικὰ) of substance, or of things which are relative to substance, or negations (ἀποφάσεις) of some of these things or of substance itself. It is for this reason that we say even of non-being that it *is* non-being (διὸ καὶ ὂν εἶναι μὴ ὂν φαμεν).[73]

We may readily admit that if Being constitutes a CDH, then the problems with respect to the unity of the science of Being are averted. In this conception, although Being does not constitute a genus, a universal study of it turns out to be possible through the study of a primary principle (ἀρχή), i.e., substance (οὐσία), because of the necessary relations found between this primary principle and its non-core instances. While being universal, this science would preserve a place for the other so-called special sciences. By virtue of CDH, then, Aristotle kills two birds with one stone, namely, while constructing the foundations of a unified investigation, at the same time he averts any problems that may emerge with respect to over-comprehensiveness. If Being constitutes a CDH, then it should fulfil three requirements that I have hitherto mentioned.

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[73] *Met*. Γ, 2, 1003b5-10.

There are many questions; however, we would like to have an answer concerning the details of Aristotle's conception of Being as a CDH. One of these questions is extremely important in terms of the aims of this thesis, questioning whether this conception of Being as a CDH is compatible with a theological conception of the science of Being that stands out in other treatises of *Metaphysics*, especially in Book E and Book Λ, or does it necessarily yield a non-theological conception of the science of Being? CDH indeed paves the way for a universal science of Being, yet, we might ask, is it the case that such a universality rules out a theological conception of the science of Being, which is, as it were, concerned with a particular part of Being, namely, the God?

These questions prompt us to examine the structure and elements of the CDH of Being in close detail. The above passage tells us that several non-core instances are Beings by virtue of their reference to substance. Substance, then, is said to be the core item in the CDH of Being. Now, if we were to know, for instance, the kind of substance that stands out as the core item in the CDH of Being this would certainly help us to make some progress with respect to the conception of the science of Being envisaged by Aristotle, simply because that substance would be the primary subject matter of the science of Being. In the level of Book Γ, Aristotle does not explicitly tell what kind of substance that might be the most suitable for the core item of the CDH of Being. Our knowledge in the level of Book Γ, therefore, is limited to the three criteria that I have previously explained and that, to a limited degree, observed in the two examples given by Aristotle, namely the example of 'health' and 'medicine'. However scarce this may be, we might still have some opportunity to go on by taking the lead from what we have so far so as to determine the possible best candidate among the types of substances for standing as the core of the CDH of Being.

2.3.1. Two Dimensions of Ontological Dependence in the CDH of Being

Since Aristotle declares that Being is a CDH, we should be able to detect ontological dependency relations in several instances of Being. Indeed, the peripheral non-core instances of Being cannot exist without the initial existence of the core item, which, in this case is substance. This is not only confirmed in the above passage I have cited but also in *Physics* as well:

> If on the other hand it is asserted that all things are quality [ποιὸν] or quantity [ποσόν], then, whether substance exists [εἴτ' οὔσης οὐσίας] or not, an absurdity [ἄτοπον] results, if indeed the impossible [τὸ ἀδύνατον] can properly be called absurd. For, none of the others can exist independently [χωριστόν], except substance [παρὰ τὴν οὐσίαν], for everything is predicated of substance as subject [καθ᾽ ὑποκειμένου τῆς οὐσίας λέγεται].[74]

Aristotle indeed finds it 'absurd' (ἄτοπον) and 'impossible' (ἀδύνατον) that the instances of Being other than substance of which the other secondary categories are mentioned in this list, exist without the existence of substance. As noted, we shall have the chance to detect in more detail the existential dependency relations in several instances of Being later in this thesis. What I want to draw attention to this time, however, is a feature that I find important to note in ontological dependency relations in the CDH of Being.

Indeed, it is important to note at this point that although one may find it not to be fairly reflected in Book Γ, one can observe two levels in the ontological dependence of CDH of Being.[75]

I argue, at least provisionally anyway, that ontological dependence in the Aristotelian conception of Being works on two levels. This conception indeed necessitates that we distinguish two dimensions in which ontological dependence functions. A rough picture of Aristotle's conception of Being suffices to show what I understand these levels to be. One can distinguish two

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[74] *Phys*. I, 2, 185a29-32. See also, *Cat*. 2b5-6.

[75] One may find the description I am about to propose highly speculative at this stage, but there is at least some evidence to go on, as we shall see, in Book Γ, and the matter is too important, because of its implications, just to leave aside. However that may be, in the course of this thesis, we will have a chance to detect two levels of ontological dependence in Aristotle's doctrine of Being. The levels of ontological dependence, as we shall soon see, will supply a certain basis for a discussion of the core element in the CDH of Being. Hence, in this part, I find it important to emphasize the levels of ontological dependence that one can encounter in CDH of Being.

fundamental constituents in Aristotle's conception of Being, one of which is substance and the other is the so-called secondary categories. Hence, it is possible to observe ontological dependency relations between substance and the other so-called secondary categories. This amounts to saying that the other so-called secondary categories cannot exist in the absence of the first category of substance, as it has already been implied in two of the passages cited so far. In the course of the treatises of *Metaphysics*, however, we will have the chance to observe another level at which ontological dependence operates. On this level, we are not concerned with the relations between the so-called secondary categories and substance, but with the relations found between several substances. Unlike the former level in which ontological dependence works in inter-categorical relations, this new dimension implies that there are existential dependency relations between intra-categorical relations, namely between several instances within a category, this time, within the category of substance. Hence, one may observe a hierarchy of substances in Aristotle's system where some substances are ontologically prior to others.

If Aristotle is to succeed with his argument, besides inter-categorical relations, the CDH of Being must operate between intra-categorical relations as well. This is for two reasons. First, if, as we shall soon see in this chapter, we had only inter-categorical relations in CDH of Being operating between secondary categories and the category of substance, then the science of Being would not be a universal inquiry into Being simply because it would not be able to study God. If God has any place in Aristotle's metaphysical doctrine, and we shall see that He has a very significant role in the system, besides inter-categorical relations, the CDH of Being must also be operating between intra-categorical relations. But there is another reason why one must include intra-categorical relations into the analysis of the CDH of Being and it follows thus: we shall see that there are three types of substances in Aristotle, namely, non-eternal sensible substances, eternal sensible substances and Immobile Substance. Now, since these three substances cannot form a single genus, and since a science can be unified either through a single genus or through the ordered homonymous

relations, the science of Being needs to be unified through CDH. This amounts to saying that by virtue of studying one of these substances, the science of Being turns out to be a universal study of Being. For this reason, also, besides inter-categorical relations, the CDH of Being must operate between intra-categorical relations as well. Before getting into the details of these two reasons why there must be intra-categorical relations in the CDH of Being, I will first try to detect the inter-categorical and intra-categorical relations in Aristotle's general conception of Being.

I have explained that, according to Aristotle, Being has several manifestations and is a πολλαχῶς λεγόμενον, i.e., it is said in many ways. These manifestations of Being are enumerated in Book Γ and we may expect to observe, at least to a certain degree, the two dimensions of ontological dependence in this listing. The analysis of the enumeration of several manifestations of Being in Book Γ, however, is not an easy task for, as we shall see, this listing is a highly peculiar one and has to be read in the context of Aristotle's several other enumerations of manifestations of Being that we encounter in his corpus. At this point, I will elucidate what is meant by 'several manifestations of Being' by looking at the whole Aristotelian corpus, which would establish a framework for an interpretation to present a satisfactory interpretation of the starting lines of Book Γ, in which a version of the enumeration of the 'several manifestations of Being' emerges.[76] Later, I attempt to detect any reflections of the levels of ontological dependence implied hitherto in the listings of several manifestations of Being that we encounter in Book Γ.

Regrettably, Aristotle's declarations regarding 'several manifestations of Being' prevent one from reaching an immediate understanding of what this term stands for. Thus, there may be uncertainty as to whether there exists a unified version of these enumerations in the Aristotelian corpus. In Book E, for instance, Aristotle elucidates a list of these several manifestations, where one

[76] Instead of using 'several senses of Being' I use 'several manifestations of Being' just to distance myself from the merely linguistic interpretations of the term πολλαχῶς λεγόμενον.

may find four basic manifestations of Being.[77] The first of these is accidental Being (κατὰ συμβεβηκός).[78] Secondly, there is Being in the sense of true (ἀληθές), which is mostly connected with propositions.[79] Being is used, thirdly as 'the figures of predication' (τὰ σχήματα τῆς κατηγορίας), namely the categories. Finally, there comes Being in the sense of potentiality and actuality (τὸ δυνάμει καὶ ἐνεργείᾳ). These are the four manifestations of Being that are enumerated in this passage. Aristotle echoes this elucidation in Book Δ as well,[80] while in Book ϑ, he expounds the same list, with the exception of accidental Being.[81] However, in Book Z he seems to spell out a considerably narrower list.[82] Quite interestingly, in terms of several manifestations of Being, Aristotle lists only some of the categories[83] of Being in this passage while he excludes three of the manifestations enumerated in the passages I have previously mentioned. Now, one might be puzzled as to whether it is the categories of Being or the other three manifestations that should be regarded as the actual referent of the 'several manifestations of Being'. I believe, however,

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[77] 'But since the unqualified term 'being' [τὸ ὂν τὸ ἁπλῶς] has several meanings [λεγόμενον λέγεται πολλαχῶς], of which one was seen to be accidental [κατὰ συμβεβηκός], and another the true [ἀληθές] (non-being being [τὸ μὴ ὂν] the false [τὸ ψεῦδος]), while besides these there are the figures of predication [τὰ σχήματα τῆς κατηγορίας], e.g., the 'what' [τὸ μὲν τί], quality [ποιόν], quantity [ποσόν], place [πού], time [ποτέ], and any similar meanings which 'being' may have; and again besides all these there is that which is potentially and actually [τὸ δυνάμει καὶ ἐνεργείᾳ]' (*Met*. E, 2, 1026a33-b2).

[78] This itself indicates a significant point of departure from Plato's understanding of Being, for in no way can accidents be regarded as Being in Plato.

[79] Aristotle investigates this sense of Being in Book E and in Book Θ and I will deal with this in the next chapter, where I inquire into Book E. My aim in the present discussion is not to conduct a detailed exposition of what Aristotle understands from every particular manifestation of Being, but rather to understand if there is any possibility of reaching a unified conception of several manifestations of Being in its multiple enumerations in the Aristotelian corpus.

[80] *Met*. Δ, 7, 1017a8-b9.

[81] *Met*. ϑ, 10, 1051a34-b2: 'The terms "being" and "non-being" are employed [λέγεται] firstly with reference to the categories [κατὰ τὰ σχήματα τῶν κατηγοριῶν], and secondly with reference to the potentiality or actuality [τὸ δὲ κατὰ δύναμιν ἢ ἐνέργειαν] of these or their opposites, while being and non-being in the strictest sense are truth and falsity [ἀληθὲς ἢ ψεῦδος].'

[82] 'There are several senses in which a thing may be said to be [Τὸ ὂν λέγεται πολλαχῶς], as we pointed out previously in our book on the various senses of words; for in one sense it means what a thing is [τί ἐστι] or a 'this' [τόδε τι], and in another sense it means that a thing is of a certain quality [ποιόν] and quantity [ποσόν] or has some such predicate asserted of it [τῶν ἄλλων ἕκαστον τῶν οὕτω κατηγορουμένων]' (*Met*. Z, 1, 1028a10-13).

[83] The verb 'κατηγορεῖν' means to predicate an attribute to a subject, rendered in Latin as 'praedica mentum' (Boethius); 'τὸ κατηγορούμενον', exceptionally 'κατηγόρημα' (e.g. *Phys.* III, 1, 201a1; *Met.* Γ, 1, 1028a33) and even 'κατηγορία' means predicate and predication (for a helpful discussion on whether 'κατηγορία' means predicate or predication, consult Yu [(2003), pp.3-7]).

that one can forestall this puzzle when one considers the general outlook of Aristotle's presentation of these listings of several manifestations of Being that emerge in the Aristotelian corpus. I should immediately record that it is possible to observe two types of listings in the passages where Aristotle spells out the 'several manifestations of Being'. The first type of these listings is what I like to call the 'broader list', which is reflected in the former listing of Book E mentioned above, according to which there are four manifestations of Being.[84] Apart from this, there is the restricted use of the term or the 'narrower list' of the 'several manifestations of Being', already reflected in the passage from Book Z.[85] This narrow version of the 'several manifestations of Being' involves only the categories of Being.[86] Hence, Aristotle accepts either a broader usage of the 'several manifestations of Being', referring to the four-fold division of Being (as truth, potential and actual Being, accidental Being and Being according to the figures of predication, i.e., the categories), or alternatively a narrower usage restricted solely to the categories of Being. The wider meaning of the term, in other words, encompasses the narrower usage.

Though we find an order in Aristotle's numerous usages of the term 'several manifestations of Being' such that these usages can be collected mainly in two listings, we cannot decide without complication which of these manifestations are used in the passage for which I have been conducting this discussion, namely the enumeration of the 'several manifestations of Being' in Book Γ, which fits exactly neither the wider nor the narrower list.

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[84] Apart from the passage in Book E, this broader list appears in *Met.* Δ, 7, 1017a8-b9; E, 2, 1026a33; Θ, 1, 1045b28; 10, 1051a34-b6.

[85] Along with the passage quoted above, this restricted sense of 'several manifestations of being' appears in *Phys.* I, 2, 185a21; *De An.* I, 5, 410a13; *Met.* Δ, 7, 1017a22; Θ, 1, 1045b28; N, 2, 1089a7; *EN* I, 6, 1096a24; *EE* I, 8, 1217b26-34.

[86] I have found 63 places in the work of Aristotle where two or more categories are mentioned. Although it is very significant to know the exact number of these categories, it seems almost impossible to determine this in the face of numerous passages that involve the enumerations of categories. Aristotle affirms in *Topics* (I, 9, 103b20-23; supported also in *Cat.* 4, 1b25-27) that there are 10 categories but usually not all of them are enumerated in texts. See, for example, *An. Post*. I, 22, 83b15-17, where the category of possession or 'having' is missing; in *Phys.* V, 1, 225b5, eight of them are enumerated excluding 'possession' and 'position'; *Met.* K, 12, 1068a8, on the other hand, enumerates seven of them excluding 'time', 'position' and 'possession'.

In this section, I shall allow myself the latitude of a certain speculation that I think provides a compelling interpretation of Aristotle's peculiar listing of the 'several manifestations of Being' in Book Γ. By articulating the reasons why Aristotle does not follow his usual routine in listing the 'several manifestations of Being' in either a wider or a narrower way, I will be undertaking a defence of Aristotle's position against any accusations of ambiguity. I hope my interpretation shows that Aristotle has good reasons for this unusual way of listing the 'several manifestations of Being' in this part of *Metaphysics*.

Let us recall the passage where Aristotle enumerates the 'several manifestations of Being' in Book Γ:

> So, too, there are many senses in which a thing is said to be [τὸ ὂν λέγεται πολλαχῶς], but all refer to one starting-point [πρὸς μίαν ἀρχήν]; some things are said to be [ὄντα λέγεται] because they are substances [οὐσίαι], others because they are affections of substance [πάθη οὐσίας], others because they are process towards substance [ὁδὸς εἰς οὐσίαν], or destructions [φθοραὶ] or privations [στερήσεις] or qualities [ποιότητες] of substance, or productive [ποιητικὰ] or generative [γεννητικὰ] of substance, or of things which are relative to substance, or negations [ἀποφάσεις] of some of these things or of substance itself. It is for this reason that we say even of non-being that it *is* non-being [διὸ καὶ ὂν εἶναι μὴ ὂν φαμεν].[87]

At least initially, one may be confused by the manifestations of Being enumerated in this list for it is difficult to see how one can relate this passage to the previously presented framework of the 'several manifestations of Being'. None of the passages previously quoted involves manifestations of Being such as privations, destructions or generations. It seems that we are in need of a new framework of interpretation, which should explain the reasons for Aristotle's inclusion of these different manifestations of Being in this listing, while at the same time explaining its relation to the other listings.

What I want to draw attention to is that in this passage one can observe precisely the fundamental role played by substance, to which all the other manifestations of Being are connected. Taking the lead from the dominance of substance in this listing, one might suggest an initial two-fold differentiation

[87] *Met*. Γ, 2, 1003b5-10.

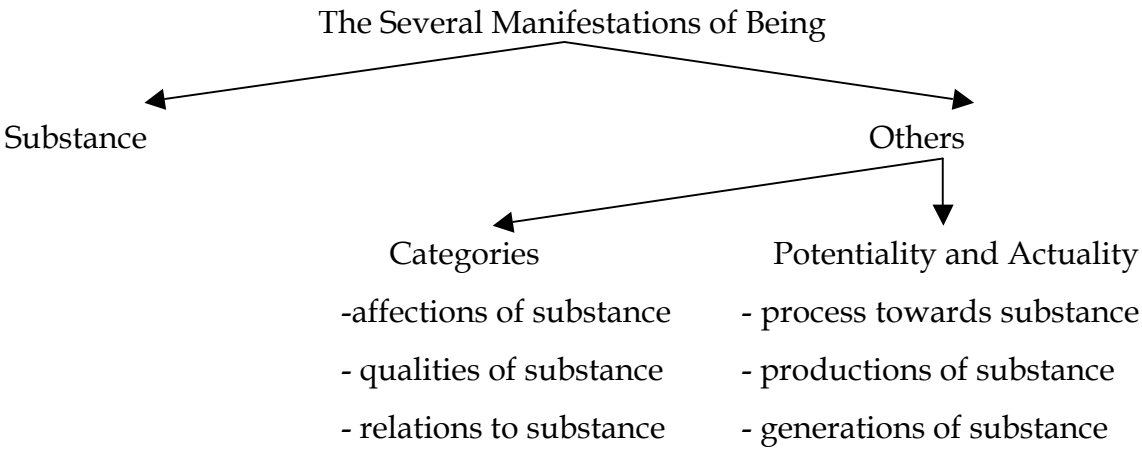
between the manifestations of Being; 'substance' standing at the one side of the equilibrium and 'others' on the other side. Certainly, at least in the first instance, what makes this passage rather puzzling is that it is very difficult to clarify what is meant by 'others', since this involves variant manifestations of Being that seem not to be involved in other places in which Aristotle enumerates the 'several manifestations of Being'. Hence, that which is to be understood by 'others' should be determined precisely in order to come up with a satisfactory interpretation of the passage. So, what should we understand from these manifestations of Being that I have named as 'others'?

Let me start with the instances that are relatively easy to interpret, such as 'affections', 'qualities' and 'relations'. These at least seem to fit one of the two previous listings of the 'several manifestations of Being', namely the narrower one, since these instances might be included in the listing of the categories, which, as it were, shows that the passage is not absolutely without relation to Aristotle's discussion of manifestations of Being elsewhere in his corpus. This prompts us to bear in mind the other discussions of the several manifestations while commenting on this passage.

Indeed, the listing of Book Γ is also not without relation to the broader enumeration of the 'several manifestations of Being', in which we have four basic manifestations of Being. Recall that one of these manifestations was the potential and the actual Being. This instance of Being is grounded on one of the most original aspects of Aristotelian philosophy; this originality proceeds from his courageous defence of a position which enabled an explanation of the processes of becoming, which contrasted with the preceding theories that focused decisively on Being rather than on 'becoming'. This instance of Being shows Aristotle's concern with explaining change (a step that had never before been taken in the way it was in Aristotelian philosophy) and his interest in the processes and the relation of these processes and their direction and perfection. This, I believe, is reflected in the above listing of Book Γ as well, and so they should be interpreted in accordance with what this connection requires. The

'processes', 'productions' and 'generations' all imply the same line of thought; that is, they are all related to change and becoming. In other words, they are grounded on an idea that implies the actualization of what previously had only a potential character, for all processes require some kind of base structure, and similarly all productions and generations entail a basis for their actualizations. This shows that the processes, productions and generations can be explained in terms of Aristotle's doctrine of actuality and potentiality. In this way, they may well be regarded as the articulated versions of what Aristotle calls 'actual and potential Being' in his broader listings of the 'several manifestations of Being'. This shows that in the listing in Book Γ, both the broader and the narrower enumerations of the 'several manifestations of Being' are reflected.

So far, we have found that it is possible to make an initial two-fold division of the 'several manifestations of Being' into 'substance' and 'others'. The 'other' senses are divided into a further two, one of which reflects the narrower list, i.e., the categories, involving 'affections', 'qualities' and 'relations', and the other can be linked to the 'actual and potential Being' of the broader list, including 'processes', 'productions' and 'generations':



Although the above diagram reflects most of the instances enumerated in the passage of Book Γ, as it stands it is incomplete, for it disregards what I wish to call 'negatives' in the listing that Aristotle provides. Hence, where should

'destructions', 'privations' and 'negations' be placed in this schema? After all, it is very unusual for Aristotle to regard these 'negatives' as Beings, for they are never included in the other listings of the 'several manifestations of Being'. This shows that, although this listing can be related to other listings of the 'several manifestations of Being' found in the Aristotelian corpus, it is a unique instance of them and correspondingly it should be interpreted by taking into consideration this uniqueness. Why does Aristotle prefer to list the 'several manifestations of Being' in such a unique way rather than following his usual habits in listing these manifestations either in a narrow or in a broader way? What is the actual motive that lies behind the inclusion of the 'negatives' in the listing?

I said that in the listing of Book Γ one immediately notices the emphasis on the core item, namely, the substance. This is closely linked to Aristotle's actual intention in the passage, which is to establish the CDH of Being, in which the core item has certain dominance over the other non-core items in the way that the former is prior in several ways to the latter. What I want to draw attention to is that in accordance with his intentions in establishing CDH, Aristotle includes the 'negatives' into the several manifestations of Being by virtue of the fact that the core item has exceptional dominance in such structures. Aristotle might succeed with this peculiar claim that even negatives are Beings on the basis of the structure provided by CDH. In this structure, whether an element exists depends on its relation to the primary instance, which is the core, i.e., substance. I am inclined to think, then, that the 'negatives', namely, the 'destructions', 'privations' and 'negations', are included in the passage just to emphasize this dominance of the core item in the CDH of Being. The dominance of the primary instance is such that we may claim that all the peripheral elements are Beings even if they are the negations and contraries of the core instance. In this conception, even the 'negations', 'privations' and 'destructions' are Beings in virtue of the fact that they are not 'negatives' in their own right but connected to a central, dominant instance, which exists in the absolute sense. The dominance of the core is such that even 'non-Being' is

included as an instance of substance. We cannot think of a pure 'non-Being' just as we do not have any word for it; rather, in all cases we have to refer to substance, the primary instance, which is the core item in the CDH of Being. That is why Aristotle forcefully claims in the passage that 'it is for this reason that we say even of non-Being that it *is* non-Being'.

This discussion shows that Aristotle's actual intention in the passage is to demonstrate the dominance of substance and this is reflected in the most extreme way, in that even 'destructions', 'privations' and 'negations' are included in the 'several manifestations of Being' on the basis of their relation to substance.[88] I believe that Aristotle intentionally swerves from his usual way of presenting the 'several manifestations of Being' in this passage in order to emphasize the dominance of the core item in the CDH of Being, which, as we have seen, serves in attaining his aim of establishing the unity of the science of Being. I believe that this interpretation makes some sense of the otherwise puzzling structure of the text, for it presents a good reason for the puzzling inclusion of the 'negatives' in the enumeration of the 'several manifestations of Being'.[89]

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[88] This interpretation of the inclusion of 'negatives' in the enumeration of several manifestations of Being, at least in its essentials, found its champions in late Antiquity. For instance, Syrianus in a rather peculiar way states that 'οὗ δὴ καὶ θαυμαζή τις καὶ δαιμονία τῷ ὄντι τῆς οὐσίας ἡ δύναμις ἀναφαίνει' (57, 7-9). He is certainly following Alexander (IV, 243, 9-15) in his commentary concerning the inclusion of 'negatives' into the several manifestations of Being. Father Owens (1951, pp. 268-269) presents a similar interpretation on the inclusion of 'negatives' into the several manifestations of Being, though it is not as articulated as mine.

[89] Many of the commentators, I believe, present unsatisfactory interpretations of this unique enumeration of the several manifestations of Being in Book Γ. My uneasiness with respect to these commentaries is founded upon the fact that they do not clarify the peculiar enumeration of manifestations of Being in this passage, as a result of which they do not present any reasons why Aristotle abandoned his usual way of enumerating these manifestations. For instance, Brentano, while commenting on this passage in his work *On the Several Senses of Being* (1975, p. 3) neither provides an explanation for the relation between this passage and the other itemisation of several manifestations of Being nor dwells upon the stress that has been put on substance in the passage. These questions remained unresolved, giving rise to a serious lacuna in Brentano's interpretation of the passage. Yu, on the other hand, argues that there is a two-fold division in the listing of Book Γ, one of which is categories and the other actual and potential Being (2003, pp. 18-19). Manifestations of Being that cannot be involved in categories, that is, those other than substance (i.e., affections, qualities and relations) are placed under actual and potential Being in Yu's classification. Yu gives an oversimplified interpretation of the passage, placing what I called 'negatives' under the division of actual and potential Being on the basis of the possible relations of these instances to motion or change. However, it is not clear how 'destructions', 'privations' and 'negations' are to be included under actual and potential

I have mentioned that it is possible to observe ontological dependency operating in two levels in the Aristotelian conception of Being. Accordingly, I have explained that one can observe ontological dependence working in inter-categorical relations, that is, between substance and the other so-called secondary categories as well as in intra-categorical relations, that is, in between several substances. Now, one might ask whether it is possible to observe these levels of ontological dependence in Aristotle's enumeration of several manifestations of Being in Book Γ. I believe this is possible. Quite plainly, the first level in ontological dependence can be reflected in this list for, as I have mentioned, 'affections', 'qualities' and 'relations' can be regarded as the secondary categories of Being and, as we are told by Aristotle in the passage, they are ontologically dependent on substance. In the light of what we have been told by Aristotle, it even seems possible to expand the scope of the first level in ontological dependence to what I have called 'negatives' as well. For all 'destructions', 'privations' and 'negations' are *of* substance, namely that they cannot exist in the absence of substance and so they are ontologically dependent on substance.[90]

Though not as explicitly as the first level, one may observe the second level of ontological dependence in the enumeration of several manifestations of Being in Book Γ as well. We have been told by Aristotle that the processes, productions and generations are all dependent on substance. I am of the opinion that this reflects the ontological dependence between intra-categorical relations, that is, between several substances. We shall see through the central

being on the basis of their relation to change. This, I believe, also conflicts with what Aristotle declares in Book Λ, that privation should be regarded as a separate principle in its own right (*Met*. Λ, 4, 1070b10-35). This at least shows that it would be perverse to read this text as tacitly allowing for privations to be placed under actual and potential Being. Other commentators, such as Ross (1924, p. 254) and Kirwan (1971, pp. 79-81) also do not seem to notice the uniqueness of the way Aristotle presents the several manifestations of Being in this passage.

[90] Though not included in the list of Book Γ, one may observe a similar relation that is found between the first category of substance and secondary categories, between substance and accidents, the latter of which is enumerated in the broader listings of the several manifestations of Being. We shall see how accidents are indeed ontologically dependent on substances in the next chapter.

books of *Metaphysics* that what is not generated is posterior to what already has been generated.[91] That is, for instance, the father is prior to the son because the former has been actualized while the latter has not. This will be discussed in more detail later when I reflect upon the priority of actuality over potentiality, while discussing the central books of *Metaphysics*. Accordingly, what I suggest is that the manifestations of Being that are related to actuality and potentiality are connected to Aristotle's discussion of the priority of actuality over potentiality, where one witnesses the ontological dependence working between several substances, that is, in intra-categorical relations.

That much is enough for what I meant to expose with respect to the levels of ontological dependence in the CDH of Being. We shall see later in this thesis that these levels will supply a framework for my discussion of possible candidates for the core item in the CDH of Being and help me to determine the best candidate for this role.

2.4. Types of Substances in the CDH of Being

My aim in expanding the CDH of Being was to see whether this structure that constructs the basis for the science of Being and that is presented exclusively in Book Γ is incompatible with the theological conception of the science of Being. The criteria upon which the CDH of Being is structured were very important in constructing the basis for answering this question. Now we may advance to see if this construction necessarily yields a non-theological conception of the science of Being. What I aim to do in the following sections is to see whether indeed the kind of science in Aristotle's mind is necessarily inconsistent with the theological conception of the science of Being that emerges later in some treatises of *Metaphysics*, especially in Book E and Book Λ.

In Book Γ Aristotle explicitly tells us that it is substance that stands as the core item in the CDH of Being. We shall soon see that there are several types of

[91] See *Met*. Z, 8, 1033b32; 9, 1034b4; Θ, 8.

substances in Aristotle's doctrine of Being. Since these several types of substances cannot form a single genus, we must be able to detect CDH operating between these types of substances, that is, in intra-categorical relations, whereby the science of Being can be unified despite the fact that it does not deal with a single genus. Hence, we must be able to detect what kind of substance that a metaphysician must primarily be dealing with. To understand what kind of science Aristotle might be espousing in this level of his analysis, one might reasonably attempt to understand what kind of substance might be suitable to fulfil the requirements of the CDH of Being. Since the primary concern of the science of Being is substance, through which the investigation propagates other manifestations of Being on the basis of the structure provided by CDH, it is most important first to understand the kind of substance that stands as the core item in such a structure; that is, if we are to determine whether the kind of science we have in hand has some characteristic, for instance, whether it is theological or not. Unfortunately, Aristotle himself does not address this question explicitly at this level of his analysis. The key concern throughout Book Γ seems to be constructing the basis for a universal science of Being through CDH.

As we are informed, the primary concern of the science of Being is substance. However, one might be tempted to wonder what the term 'substance' in fact stands for, as it were; the term 'substance' is ambiguous in a way one might not suspect. Indeed, throughout his corpus, Aristotle seems to use this term as the referent of several things; it may refer to material bodies such as earth, fire, water and air[92] as well as to pure formal natures. It may also refer to composites that are constituted from matter and form[93] such as 'man' and 'horse'.[94] These composites may involve artificial products as well, such as houses.[95] In fact, Aristotle himself seems to be well aware about this ambiguity and addresses

[92] For the passages, where Aristotle discusses material substances, see, for instance, *Phys*. II, 1, 193a9-20; *Met*. Z, 3, 1029a23; H, 2, 1042b9; 4, 1044a15; ϑ, 7, 1049a19.
[93] σύνθετος οὐσία: cf. *Cael*. III, 1, 298a29.
[94] *Cat*. 4, 1b27; *De An*. II, 1, 412a16.
[95] cf. *Phys*. II, 1, 192b34.

the problem in several places in his corpus.[96] Hence, whether we should accept that the term refers to composites, such as table, horse etc., to form or to matter is not a clear issue that one might readily answer.

Despite this ambiguity over the term substance, however, one might still make some progress from the outlook of Aristotle's claims about substance throughout his corpus. This outlook necessitates that there are indeed several types of substances distinguished in the Aristotelian doctrine of Being. Once we have these types of substances, we may test which one of these types is suitable to stand as the core item in the structure established in Book Γ. By virtue of this, one might determine whether the structure of the science established in Book Γ is in fact inconsistent with the theological conception of the science of Being that we basically encounter in Book E and Book Λ.

In *Parts of Animals*, Aristotle seems to employ a rough classification of the types of substances, which would enable him to advance his investigation: 'Of substances constituted by nature [φύσει συνεστᾶσι] some are ungenerated [τὰς μὲν ἀγενήτους], imperishable [ἀφθάρτους], and eternal [τὸν ἅπαντα αἰῶνα], while others are subject to generation [τὰς δὲ μετέχειν γενέσεως] and decay [φθορᾶς]'.[97] The classification implies that there are two types of substances, one is eternal and the other is perishable, without however, informing us whether a further sub-division between these substances is possible based on the natures of these substances. The classification also excludes any artificial products (e.g. a table or a sculpture) and is content to deal with only natural substances, but perhaps this is in harmony with Aristotle's aims in *Parts of Animals*, where he primarily focuses on natural substances.

In *Physics*, Aristotle again presents a classification of substances, which is more detailed than that he suggests in *Parts of Animals*:

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[96] See, for instance, *De. An*. II, 1, 412a6; *Met*. Z, 2, 1028b8; 10, 1035a2; 15, 1039b21; H, 1, 1042a6ff.; 2, 1043a27; 3, 1043a30; Λ, 3, 1070a20. Cf., also, *De An*. II, 2, 414a15; *PA* I, 5, 644b22; *Met*. Λ, 3, 1070a9.
[97] *PA* I, 5, 644b22-24.

> Hence there are three branches of study, one of things which are incapable of motion [ἡ μὲν περὶ ἀκινήτων], the second of things in motion [ἡ δὲ περὶ κινουμένων], but indestructible [ἀφθάρτων], the third of destructible things [ἡ δὲ περὶ τὰ φθαρτά].[98]

This seems to be a more comprehensive classification in which we have three substances to each of which is appointed a branch of study. Substances are divided into two by the criterion of whether they are movable or immovable. The movable substances further divided into two sub-categories based on the criterion of being destructible or not.

A similar classification, now with the greatest possible precision, is presented in the first chapter of Book Λ:

> There are three kinds of substance [οὐσίαι δὲ τρεῖς] – one that is sensible [αἰσθητή] (of which one subdivision is eternal [ἀΐδιος] and another is perishable [φθαρτή], and which all recognize, as comprising e.g. plants and animals), – of this we must grasp the elements, whether one or many; and another that is immovable [ἀκίνητος] (...)[99]

Just as in the case of the classification made in *Physics*, in the present passage Aristotle makes an initial division of substances into two types, namely, sensible and immovable substances. A further sub-division is made of sensible substances into eternal and perishable substances. We may affirm that this classification is identical with the one that we encounter in *Physics*, if only we can identify the referents of sensible and movable substances with each other. Later, when we examine what constitutes the content of movable substances, we will understand that it is indeed possible to identify these types of substances with that of sensible substances. On these grounds, then, two of the classifications do not involve a major difference. The difference, on the other hand, in the presentation of these two classifications may lie in the fact that Aristotle's intention in presenting the passage in *Physics*, which is for the most part to examine the principles of movement, differs from his basic interest in

[98] *Phys*. II, 7, 198a29-31.
[99] *Met*. Λ, 1, 1069a30-33.

Book Λ, which is marked by a comprehensive study of substance.[100] Not only is the classification of Book Λ in harmony with the classification we encounter in *Physics*, but also it is consistent with the one we come across in *Parts of Animals*. Perhaps one might suggest that the classification of Book Λ is an articulated version of the classification that we meet in *Parts of Animals* in which the substances are distinguished into eternal and perishable. Since, in harmony with Aristotle's intentions in that part of his corpus, this classification in *Parts of Animals* is limited to 'substances constituted by nature' we may affirm that it covers only part of the story, leaving aside what Book Λ will recover later by articulating what has not been previously differentiated in between eternal substances, namely, the immovable substance. On this view, what is meant by eternal substances in *Parts of Animals* is distinguished further into immovable and movable substances in Book Λ.

Hence, according to the cumulative result of Aristotle's claims with respect to types of substances, one might conclude that his theory recognizes three fundamental types of substances. Based on Aristotle's declarations, I prefer to identify these substances as such: non-eternal sensible substances (NSS), eternal sensible substances (ESS), and Immobile Substance(s) (IS).[101]

My discussion concerning the types of substances constitutes sufficient grounds for what I aim to examine in this part of my thesis and to advance by elucidating what Book Γ quite ambiguously presented with respect to the CDH of Being. Hence, though the term 'substance' is not elucidated in Book Γ, we may take the lead from what we have been told with respect to several types of substances, whereby we might advance the investigation to see if the construction upon which the universal science of Being is established, namely CDH, is compatible with the theological conception of this science that we encounter in other treatises of *Metaphysics*. To this end, one may test the types

[100] This claim needs to be supported against some possible oppositions and I will reflect on this topic in the final chapter of this thesis, where I will discuss Book Λ.
[101] Whether this last type consists of one or many substances will have no effect on what I aim to argue in this part of my thesis. I reflect upon this subject while I discuss Book Λ.

of substances discussed hitherto against the criteria upon which the CDH of Being is structured by inserting these substances into the structure of the CDH of Being to see which of the several types of substances is most suitable in fulfilling these criteria. After all, the general features of CDH may be fulfilled by a certain single type of substance, rather than all the possible types of substances, whilst we affirm solely, though quite ambiguously, that 'substance' is the core of the CDH of Being. Besides, as I have mentioned, the three types of substance cannot form a single genus. The system, therefore, must employ CDH operating between several types of substances if it is to pave the way for a single universal science despite multiplicity. This amounts to saying that in studying one type of these substances as its primary subject matter, the science of Being will turn out to be a universal study into Being. In what follows, I will test three types of substances against the CDH of Being to unearth the type of substance that seems to be most suitable according to Aristotle's declarations in Book Γ with respect to the CDH of Being. By that means, I aim to assess whether the theological conception of the science of Being is compatible with Aristotle's declarations in Book Γ.

2.4.1. Non-Eternal Sensible Substances (NSS)

We might call substances with simple material bodies, such as fire and earth,[102] as well as substances that are composed of matter and form[103] like plants and animals,[104] such as man and horse,[105] non-eternal sensible substances (NSS). We may add artificial products (e.g. houses)[106] under this class of substances as well. Now, we might ask whether it is possible to consider NSS as the primary elements of CDH of Being. As I have mentioned, Aristotle neither distinguishes these types of substances in Book Γ nor does he face this question explicitly (or implicitly) in this part of *Metaphysics*. Nevertheless, I believe we have sufficient

[102] For material substances, see, *Phys*. II, 1, 193a9-20; *Met*. Z, 3, 1029a23; H, 2, 1042b9; 4, 1044a15; ϑ, 7, 1049a19.
[103] σύνθετος οὐσία: cf. *Cael*. III, 1, 298a29
[104] *Met*. Λ, 1, 1069a30-33.
[105] *Cat*. 4, 1b27; *De An*. II, 1, 412a16.
[106] Cf. *Phys*. II, 1, 192b34

evidence in Book Γ to progress in order to attain some sense of the possible answer by looking at the three features (i.e., causal connectedness, logical dependence, and ontological dependence) upon which the CDH of Being is established.

It seems that the case is not so confused when it comes to whether we might affirm that NSS are ontologically prior to the other so-called secondary categories, for it seems obvious at once that a sensible substance can satisfy the requirements of ontological dependence (OD) that I have described hitherto.[107] None of the other categories exists without the existence of NSS, for NSS can well be regarded as the basic substratum of all the other so-called secondary categories. For instance, a quality, such as pale, finds its possibility to exist in one of the NSS (e.g. Callias) and this is so for the other categories as well. None of them can exist without the initial existence of substance.

When we consider what I have called 'causal dependence' (CD), once again, the case is not complicated for this seems to be fulfilled by NSS as well. At the outset, CD seems to be satisfied by NSS, for the reason that NSS can be regarded as the basic causes of the existence of the other so-called secondary categories. A particular paleness, for instance, not only exists by virtue of a primary substance, such as Callias, but is also conditioned to that primary instance in its existence. By virtue of providing the basic substratum, then, NSS can also be regarded as the causes of the other categories' existence. NSS, therefore, seem to be capable of meeting ontological dependence in both of its forms, whether OD or CD. This implies that they are strong candidates for being the core item in CDH of Being.

Recall, however, that I have distinguished two levels in ontological dependence in the context of the CDH of Being, whereby this connection can be assessed to be operating between inter-categorical and intra-categorical relations. When one takes into account these levels in ontological dependence, one might notice

[107] See 2.2.8.

that the requirements of ontological dependence may not be as simple as they appear on first examination. This requires that the ontological priority of NSS should not only work between so-called secondary categories and NSS but also between several types of substances as well. NSS may be regarded as the causes of other primary substances (i.e., other NSS), though in a very limited sense. This particular tree, which is an NSS, may be regarded as the cause of another particular tree, which itself is an NSS, but cannot be the cause of *all* the other trees that exist. Furthermore, a tree cannot be the cause of the existence of other members of NSS (e.g. Callias) as well.[108] In other words, man that is a certain species of the genus animal begets man but not any other species of NSS;[109] and a particular tree cannot be the cause of another tree if the latter is not produced from the former. Hence, CD operates in quite a limited way between NSS for the simple reason that a particular NSS cannot be regarded as the principle of every other NSS and, therefore, cannot properly be regarded as the cause of the existence of these other NSS as CD requires.

Furthermore, NSS cannot be regarded as the causes of the existence of the other types of substances that we encounter in the Aristotelian Universe and that are placed above them, namely the ESS and IS. On the contrary, as we shall see through the course of this study, the latter are principles of the former but not

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[108] This, also, yields a famous principle in Aristotelian philosophy, which prohibits the transitivity between genera (for this principle, see *An. Pr*. I, 30, 46a17ff.; *An. Post*. I, 7; *Top*. VIII, 12, 162b7; *Cael*. I, 1, 268a30-b3; *Met*. Δ, 28, 1024b15; I, 7, 1057a26-28; M, 9, 1085a16-19). According to this principle, one cannot transmit the investigation from one genus to another (I have previously discussed this principle while inquiring into how genus unifies a science and how this structure is threatened by the problem of μετάβασις, and for this reason, for example, it is impossible to transfer the arguments of arithmetic to geometry (for magnitudes are not numbers)). The roots of this principle, however, may rest on significant doctrinal differences between the conceptualizations of Being in Plato and Aristotle. Contrary to Plato's system of Being, which allows for the existence of an ultimate genus under which other Beings are situated and partake of their existence, Aristotle's doctrine of Being does not allow for an ultimate genus to which all other Beings are reducible. Aristotle, therefore, aspires to several ultimately irreducible and intransitive genera of Being, namely, the categories. In such a conceptualization, any Being under a certain genus cannot beget a Being under another genus and Being is in no way reducible to a single universal begetter. Therefore, the study of Being in such a conceptualization requires a different tool for unification, which, in Aristotelian terminology, is *pros hen*.

[109] This is explicitly confirmed in *Phys*. II, 1, 193b8; 2, 194b13; 7, 198a26; III, 2, 202a11; *GC* II, 6, 333b7; *PA* I, 1, 640a25; II, 1, 646a33; *GA* II, 1, 735a21; *Met*. Z, 7, 1032a25; 8, 1033b32; Θ, 8, 1049b25; Λ, 3, 1070a8, 28; 4, 1070b31-34; N, 5, 1092a16; *EE* II, 6, 1222b17. Apart from these passages, see also *HA* I, 5, 489b11; *GA* I, 9, 718b29; II, 1, 732a34.

vice versa. In the case of NSS, therefore, it seems that the ontological dependence cannot operate in a proper way so as the pave the way for a universal study of Being. Their examination will lead to the study of the so-called secondary categories and some of the other NSS whilst this will not allow for any knowledge with respect to the other higher types of substances for the simple reason that these latter substances are not ontologically conditioned by NSS. Accordingly, the study of the former instances of Being through NSS is not possible. The necessary relations required in CDH through which a universal study is propelled, then, cannot be fully established in the case of NSS.[110]

Recall that, according to the general schema of CDH provided earlier in this chapter, one expects to find causal connectedness between the instances of Being if the necessary relations are to be fully constructed for the case of the CDH of Being. Accordingly, the question that is to be gauged at this moment should address whether NSS are reliable candidates for fulfilling the causal relations in CDH of Being.

The situation, however, is not as plain as it seems in the first instance for, similarly to the case of ontological dependence, one may find two levels in the causal relations between primary and secondary terms of CDH of Being. The first level addresses the causal links between NSS and the secondary categories, whereas the second level focuses on the causal relations between NSS and other substances, though not necessarily sensible substances. Hence, the first level in the causal relation in CDH of Being questions whether NSS fit at least one of the standard modes of causation in their relation to secondary categories. The second level, on the other hand, asks whether NSS are reliable candidates to stand as the cause of every possible type of substance.

[110] I will not, on this occasion, discuss whether NSS is capable of meeting the requirements of logical dependence, for this requires some knowledge of Aristotle's examination of definition in Book Z, which will be provided in the fourth chapter. Without engaging in a detailed discussion of Aristotle's theory of definition of substances, however, it is almost impossible to decide whether NSS are capable of fulfilling the requirement of logical dependence. The situation is no different for other types of substances that will be dealt with this part as well, namely, ESS and IS, since the definitions of these substances require a discussion of Book Z, which, on this occasion, it is impossible to provide.

I will start with the first level and inquire into whether NSS are capable of fulfilling the required causal relations in the CDH of Being. One might see that the answer is in the positive, given that NSS fit one of the four standard modes of causation in their relation to several categories. I have already noticed that a particular quality, say paleness, exists by virtue of a particular substance, say Callias. In such a relation, physical parts of Callias' body can well be regarded as the material cause of paleness. To see whether other causal connections can be found between NSS and the secondary categories one might prefer to turn to the text of *Categories*, where Aristotle discusses affective qualities:

> Similarly, with regard to the soul also we speak of affective qualities (παθητικαὶ ποιότητες) and affections (πάθη). Those which are present right from birth as a result of certain affections are called qualities, for example, madness and irascibility and the like; for in virtue of these people are said to be qualified (ποιοὶ γὰρ κατὰ ταύτας λέγονται), being called irascible and mad.[111]

The passage confirms that qualities such as madness can be regarded as the affections of the soul. In such cases, one might assert that the soul is the formal cause of the quality of madness for the reason that such affective qualities are present right from birth in the soul of an individual substance such as Callias. Not only in the category of quality can one find such examples of causal relations. A further example, accordingly, can be taken from the category of quantity. Language, for instance, can be regarded as a discrete quantity[112] employed to illustrate the causal relations found between NSS and the other categories. What is meant by language in this case is the language that is *spoken*.[113] Now language can be connected to a particular sensible substance, such as Callias, in standard modes of causation. Callias' articulate tongue, his vocal cords and his lungs can be regarded as the material causes of language that is spoken, building up the material substratum for the existence of spoken language. Again, Callias' soul can be regarded as the formal cause and Callias himself can be considered as the efficient cause of language. This shows that

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[111] *Cat*. 8, 9b33-10a2.
[112] See *Cat*. 6, 4b24 for language as a discrete quantity.
[113] *Cat*. 6, 4b33.

one can find the required causal relations between NSS and the secondary categories, as I have illustrated. This means that NSS fulfil the necessary requirements of causal bounds that should be detected in a CDH.

As I have mentioned, it is possible to find a further level in causal relations in the CDH of Being, in which, along with the secondary qualities, substances themselves are also involved in the picture as peripheral instances of the core item, connected to the core item by virtue of one of the four standard modes of causation. In this level, the question at issue addresses whether it is possible to find causal relations between NSS, standing as the primary term, and other types of substances as the peripherals. As one might notice that this requirement is more demanding compared with the first level simply because it requires the causal primary term to be one of the four causes of not only the other categories but also the other substances as well. If NSS is to be regarded as causally prior in the absolute sense, that is, if the knowledge of them is to provide knowledge not merely of a part of Being but of all things that *are*, one might reasonably expect that NSS should be regarded as causally connected not only to the other so-called secondary categories but also to the other types of substances as well. Otherwise, one might reasonably conclude on the basis of the fact that there can be other substances that are not causally connected to NSS that these other unconditioned substances might be regarded as better candidates for being the core item in the CDH of Being. After all, if causal connectedness cannot be established in the fullest sense, the study of NSS will not turn out to be a *universal* study of *all* things that *are*.

Now it seems at once that NSS can indeed be regarded as the cause of other NSS. Callias, for instance, can be regarded as the efficient cause of a particular sculpture, which itself is one of the sensible substances. His soul can be regarded as the formal cause of the sculpture as well. Similarly, what is intended from a particular tree is the fruit, which itself is a sensible substance and which can be regarded as the final cause of the tree. Taking the lead from these examples one might not, however, conclude that NSS meet the

requirements of causal connectedness for these seem not to be sufficient on the grounds that such examples are limited to particular NSS that can in no way be interpreted as paving the way for one to affirm that NSS are the ultimate universal principles of all that *are*. It is possible to observe this in the examples I have given so far, for the reason that while that Callias is responsible for making a particular sculpture, he cannot be in any way be regarded as the proper cause of all the sculptures that happened to be made by any other sculptor. Callias, in this sense, cannot be regarded as the universal principle of *all* sculptures that exist. Similarly, a particular fruit cannot be regarded as the ultimate final cause of all trees that exist.

This discussion shows that NSS have fulfilled some of the requirements of CDH, but only in a limited sense, and so they do not seem to be the most accurate or proper candidates to be the core item in the CDH of Being. These types of substances are insufficient for fulfilling ontological dependence and causal relations in the fullest sense. Let us proceed to examine the other types of substances, this time, eternal sensible substances, and see if these are capable of fulfilling the general requirements of the CDH of Being explained so far.

2.4.2. Eternal Sensible Substances (ESS)

In order to determine whether eternal sensible substances are capable of meeting the requirements of the CDH of Being, let me very briefly explain what kind of substances are to be regarded as ESS. These are the heavenly spheres, such as the planets and the stars situated above the Moon.[114] The heavenly stars are divine,[115] fiery,[116] spherical bodies,[117] that move with an eternal circular

[114] The planets are nearer to the Earth than the stars (*Cael*. II, 8, 290a19 cf. *An. Post*. I, 13, 78a30). Aristotle's cosmology is entirely descriptive; it cannot be seen as a theory addressing the origins of the cosmos and hence cannot be regarded as a cosmogony. The necessary continuous circular movement of heaven is eternal and does not deserve any explanation concerning its origins. In this part, I will limit my inquiry with respect to Aristotle's exploration of heavenly bodies by merely considering such bodies as substances to test them as primary instances of the CDH of Being against the background explained hitherto.

[115] *NE* VI, 7, 1141b1; *OU* 2, 391b17.

[116] *Cael*. II, 7, 289a19-35 cf. *Meteor*. I, 3, 340a28; *GA* II, 3, 737a1.

[117] *Cael*. II, 8, 290a7.

motion[118] – the swiftest and most self-contained motion[119] – and have nothing bad, nothing defective and nothing perverted in their natures[120] and they are located in the upper portion of the Universe.[121] These substances have no generation or corruption due to the simple fact that they are eternal.[122] Since they are perceptible and since they engage in a certain type of movement, they involve matter in their natures.[123] The perfect instance of such substances is the sphere of the fixed stars;[124] in a descending order, we find several other planets (such as Jupiter (Φαέθων), Mars (Πυρόεις), Saturn (Φαίνων) and Venus (Φωσφόρος) etc.).[125]

Now if such substances can be regarded as the proper candidates for fulfilling the role of the primary term in the CDH of Being, they must be ontologically prior in both levels mentioned earlier in this chapter, that is, they must be ontologically prior both to secondary categories and to the other types of substances as well. First, like NSS, these substances have qualities and quantities and they are in a certain place, etc. which means that the other categories reveal themselves in ESS by the way in which they exist. These substances, therefore, are ontologically prior to other categories in the way that OD requires for the other so-called secondary categories cannot exist in the absence of such substances.

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[118] *Cael*. II, 3, 286a18; 10, 291b2; 12, 293a12; *GC* II, 11, 338a22; *Meteor*. I, 8, 346b12 cf. *Phys*. VIII, 8, 263a3.
[119] *Cael*. II, 8, 290b2.
[120] *Met*. Θ, 9, 1051a20.
[121] *OU* 2, 391b17 cf. *Cael*. I, 9, 278b18.
[122] *Met*. N, 2, 1088b24; 3, 1091a12; *NE* VI, 3, 1139b24; cf. *GA* II, 1, 731b24.
[123] Matter found in ESS is different in character from the matter encountered in non-eternal sensibles: the latter engage in several alterations; they, in other words, engage in quantificational, locational, qualificational, etc. movements, whereas the former engage only in locational movement, even the first type of such movements, which is the circular motion (for circular motion and its status in several types of movement, see *Phys*. VIII, 8; 9; *Cael*. I, 12, 282a23; *Met*. Λ, 7, 1072b9. Cf. *Meteor*. I, 1, 338b22): 'Now all things that change have matter [ὕλην ἔχει], but different matter [ἀλλ' ἑτέραν]; and of eternal things [τῶν ἀϊδίων] those which are not generable [μὴ γενητὰ] but are movable [κινητὰ] in space have matter – not matter for generation [οὐ γενητὴν], however, but for motion from one place to another' (*Met*. Λ, 1, 1069b24-26). Therefore, the matter involved in such substances is needed solely to endure an eternal movement and has a different character from the matter needed for other types of movement (see also *Met*. Λ, 7, 1072b7; 8, 1073a22-27).
[124] See *Cael*. II, 6, 288a15; *Met*. Λ, 6, 1072a10; 7, 1072a21; 8, 1073a24.
[125] *Met*. Λ, 8, 1073b31ff. See also *Cael*. II, 12, 292a24; *Met*. Λ, 8.

Recall that this criterion is also met by NSS and hence the question that interests me now is whether ESS is capable of fulfilling the requirements of CD on both levels, that is on the level addressing the ontological dependencies between the core item and the secondary categories as well as the level concerning ontological dependence that can be found between primary term and other types of substances, as this latter criterion cannot be fully met by NSS. We know that ESS are indeed prior to NSS.[126] But having said this, we should not let ourselves believe that ESS is absolutely prior to all the other types of substances for the simple fact that these substances themselves are moved and conditioned by a still higher substance, situated above them, which does not contain any contingent material parts and which is not conditioned by any other substance.[127] This shows that ESS fulfil the requirements of ontological dependence, however, in a limited sense, and they cannot be regarded as absolutely prior to everything else that we may encounter in the Aristotelian Universe. If we were to accept these substances as core items in the CDH of Being, the investigation would indeed propagate to NSS. Nevertheless, on the grounds that the necessary connections are not fully established, such a study would exclude the immaterial higher substance(s), namely, IS, to which these ESS are not ontologically prior. For that reason, although the inquiry would cover a considerable part of the Universe, it nevertheless would not cover every part of Being, that is, it would not be universal in the absolute sense. This prompts us to investigate a better candidate in Aristotle's Universe, one that would fit better the conception presented in Book Γ with respect to the CDH of Being by virtue of satisfying all the possible requirements of ontological dependence. Before that examination, however, let us proceed to investigate whether ESS are capable of meeting the requirements of causal connectedness explained hitherto.

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[126] '...for eternal things [ἀΐδια] are prior in substance [πρότερα τῇ οὐσίᾳ] to perishable things [τῶν φθαρτῶν]...' *Met*. Θ, 8, 1050b6-7.
[127] *Met*. Λ, 7.

Now it seems that ESS meet the requirements of both of the levels of inter-categorical and intra-categorical relations in causal connectedness since they stand as one of the standard modes of causation not only of secondary categories but also of NSS. In order to illustrate this, it is helpful to investigate the case of the Sun, one of the several kinds of ESS, which by virtue of its movement stands as the common efficient cause of sensible substances. Aristotle explicitly affirms in *De Generatione et Corruptione* that coming-to-be occurs as the Sun comes near, whereas decay happens when it retreats.[128] By virtue of approaching in summer and retreating in winter, the Sun causes the conversion of the seasons, which, in turn, causes the generation and corruption of many things on Earth – such as plants and animals – and with them, it causes the generation of many qualities. The movement of the Sun, then, is responsible for the generation and corruption on the Earth and therefore should be regarded as one of the ultimate efficient causes of NSS on Earth.[129] Causal relations, therefore, can be observed not only between the ESS and the secondary categories but also between ESS and NSS. This is not sufficient to conclude, however, that ESS ultimately meet the requirements of causal connectedness. The basic reason for this insufficiency lies in the fact that ESS themselves are causally conditioned to a still higher substance. In other words, they are not the original reasons of all Being, but instead there is a higher substance in Aristotle's system to which all other substances are linked, even ESS. Hence, if we were to place ESS as the core of the CDH of Being, the inquiry

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[128] This is confirmed in *GC*, II, 10, 336b15; 11, 338b3; *Met*. Λ, 5, 1071a15ff. Cf. *Meteor*. I, 3, 341a20; II, 5, 363a14; 6, 364b15; *HA* VIII, 13, 598a3; *Prob*. XXV, 6, 938b3; XXVI, 34, 944a30; 52, 946a23 (in *GA* IV, 10, 777b26, however, Aristotle affirms that the Moon contributes to all generation and development because of its intimacy with and its participation in the Sun). See *GA* I, 2, 716a14 for an analogy which links the Earth with mother and the Sun with father. (I find similarities between the role of the Sun in Plato and Aristotle. On to the role of the Sun, while he makes a comparison between the good and the Sun, Plato states: 'You'll be willing to say, I think, that the Sun not only provides visible things with the power to be seen but also with coming to be [τὴν γένεσιν], growth [αὔξην], and nourishment [τροφήν], although it is not itself coming to be.' (*Republic*, VI, 509b2-4).)

[129] This mention of the movement of the Sun is necessarily brief and dogmatic, although the interpretations suggested are not idiosyncratic. One's first reaction might be to wonder how this generation and corruption could actually be possible. A detailed exposition of this movement and its effects, however, would take us very far off the track, for which reason I do not intend to embark on a detailed discussion of the Sun and its possible effects. The movement of the Sun by which it causes the generation of things in Earth is neatly encapsulated by Thomas Aquinas (p. 587 n. 2511).

would exclude what is independent of them and thus, it would be impossible to conclude that the study of Being through these substances is universal in the absolute sense.

The general upshot of this discussion is that neither of the kinds of substances we have seen so far is sufficient to fulfil the requirements of the CDH of Being in the absolute sense. Is it, however, possible to find a substance that fulfils all the requirements of ontological dependence and causal connectedness in Aristotle's system in the absolute sense? I have implied that without the evidence provided from the other treatises of *Metaphysics* it seems impossible to answer this question in full, though some progress may at least provisionally be made. We have at least seen that NSS and ESS cannot provide the sufficient means by way of which a science that is based on CDH operates, seeing that they are incapable of meeting the requirements of this special type of relation in the fullest sense. The discussion so far has shown that even though these substances were accepted to meet the requirements of logical dependence, discussion of which is postponed to later stages of this thesis, they nevertheless could not be regarded as the proper candidates for standing as the core item in the CDH of Being.

We have yet another candidate, however, which is Immobile Substance(s). Let us now proceed to inquire into such type of substance(s) and see if this type is capable of meeting the two requirements of the CDH of Being.

2.4.3. Immobile Substance(s) (IS)[130]

[130] I would like to note, at the outset that my presentation of Aristotle's conception of IS(s) in this part will be highly descriptive and brief. Justifications of some of the claims found in this part of my text will be provided later when I reflect on Book Λ of *Metaphysics*. The present aim is to find out, at least provisionally, whether there exists an inconsistency between the special structure building up the basis for the science of Being (i.e., CDH) which stands out in Book Γ and the general conception of IS, namely God, that we encounter in other treatises of *Metaphysics*, especially in Book Λ. In the respective chapter in which I deal with that part of *Metaphysics*, that is, in chapter V, I will do my best to justify the claims that may seem unsubstantiated in this part.

The question at issue is this: is it possible to affirm that the peripheral instances of Being are combined with IS by virtue of one of the standard modes of causation? A brief examination of the fourth and fifth chapters of Book Λ may give us some clues as to whether IS can be regarded as a universal cause of all Beings in the Universe by virtue of fitting one of the standard modes of causation.[131]

Aristotle seems to address this question explicitly and he starts his investigation by examining whether it is possible to affirm that the causes and principles of different things may be said to be the same:

> The causes [αἴτια] and the principles [ἀρχαὶ] of different things are in a sense different, but in a sense, if one speaks universally [καθόλου λέγῃ] and analogically [κατ' ἀναλογίαν], they are the same for all [ταὐτὰ πάντων]. For we might raise the question whether the principles and elements [στοιχεῖα] are different or the same for substances and for relatives [πρός τι],[132] and similarly in the case of each of the categories.[133]

Aristotle's carefully qualified remarks seem to suggest that though the principles and causes of things are different, a common reason can be postulated if one 'speaks universally (καθόλου λέγῃ) and analogically (κατ' ἀναλογίαν)'. Aristotle seems to be quite certain that, in a sense, it is not possible to postulate reasons common to all things because it is impossible to affirm that the secondary categories and substance originate from a common principle,[134] since if it were possible to assert this, we would be in a position to accept that the elements of all things are one and the same.[135] Correspondingly, it is

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[131] I shall not give a detailed discussion of these two chapters of Book Λ but rather construct a fairly rough framework to establish the background of the present discussion of CDH of Being and IS. This sketchy portrait, however, will be developed in the last chapter, where I comment on Book Λ of *Metaphysics*.

[132] One should not be confused by the mention of relatives in this passage. Aristotle's sole aim in citing 'relatives' (πρός τι) might be to illustrate the categories of Being. The reason why he chooses 'relatives' as one of the examples of secondary categories might be that this category can be regarded as the farthest away from the primary category of substance. By way of this, Aristotle attracts attention to the contrast between the first category of substance and the secondary categories. For the category of relative and its position to primary category of substance, see *Met*. N, 1, 1088a23.

[133] *Met*. Λ, 4, 1070a31-35.

[134] 'But it is paradoxical [ἄτοπον] that they should be the same for all [ταὐτὰ πάντων]. For then from the same elements will proceed relatives and substances.' *Met*. Λ, 4, 1070a35.

[135] See *Met*. Λ, 4, 1070b1ff. for the details of this argument.

impossible to postulate a universal principle that can be applied to all things. The principles of individual things are individuals themselves:

> The universal [τὰ καθολου] causes, then, of which we spoke do not *exist* [οὐκ ἔστιν]. For the *individual* is the source of the individuals [ἀρχὴ γὰρ τὸ καθ' ἕκαστον τῶν καθ' ἕκαστον]. For while man [ἄνθρωπος] is the cause of man universally [ἀνθρώπου καθόλου], there *is* no universal man [οὐκ ἔστιν οὐδείς]; but Peleus is the cause of Achilles, and your father of you, and this particular *b* [τοδὶ τὸ Β] of this particular *ba* [τουδὶ τοῦ ΒΑ], though b in general is the cause of *ba* taken without qualification [ἁπλῶς].[136]

Contrary to Plato's theory of ideas, Aristotle's doctrine does not allow for the existence of separate universals. According to this line of thought, all that exists in the Universe are individuals that originated from other individuals. Since non-existing universals cannot be the reasons for existing individuals, we cannot postulate universal principles and every individual has its own proper individual cause. This particular tree, for example, is the cause of this particular fruit and it is impossible to postulate a universal tree that can act as the cause of all individual fruits.

Though it is impossible to postulate universal reasons in this context, Aristotle still believes that, in another sense, namely, analogically (κατ' ἀναλογίαν), we can postulate universal reasons that can be applied to every individual substance.[137] When Aristotle's general description of analogy is considered, one might be confused as to how indeed Aristotle might succeed with his claim that favours the application of universal reasons to individuals in an analogical way. Indeed it is not clear at once how his description of analogy in *Nicomachean Ethics*, which is generally said to be proportional (or arithmetical proportion), in which four terms are linked together by virtue of the equality of ratios, paves the way for such a utilization: 'As the term A, then, is to B, so will C be to D, and therefore, *alternando*, as A is to C, B will be to D.'[138] It seems, however, that

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[136] *Met*. Λ, 5, 1071a19.

[137] 'And in yet another way, analogically [τῷ ἀνάλογον] identical things [αἱ αὐταί] are principles [ἀρχαὶ]...' *Met*. Λ, 5, 1071a3-4.

[138] *NE* V, 3, 1131a31ff. This is echoed in *Met*. Δ, 6, 1016b34 (cf. 1018b13) and in *Poet*. 21, 1457b16. Some examples of this kind of analogy are as follows: '...as the bronze is to the statue, the wood to the bed...' *Phys*. I, 7, 191a8; 'Bird and fish only agree in having analogous organs; for what in the bird is feather, in the fish is scale.' *PA* I, 4, 644a21 (this is echoed in *HA* I, 1, 486b19 as well)

to Aristotle's mind, not all analogies should be in this form. In other words, the kind of analogy intended to be employed to postulate universal reasons seems to favour a more flexible type, in which terms such as 'matter' and 'form' are used as general typologies paving the way for one to apply these terms to numerous things in an analogical way. In this way, as Aristotle maintains, one can postulate universal reasons through analogy:

> And if we inquire what are the principles [ἀρχαὶ] or elements [στοιχεῖα] of substances [τῶν οὐσιῶν] and relations [πρός τι] and qualities [ποιῶν] – whether they are the same or different, [A] clearly when the terms 'principle' and 'element' are used in several senses [πολλαχῶς γε λεγομένων] the principles and elements of all are the same, [B] but when the senses are distinguished the causes are not the same but different, [C] except in a special sense the causes of all are the same. [D] They are in a special sense the same, i.e., by analogy [τὸ ἀνάλογον], because matter, form, privation, and the moving cause are common to all things; [E] and the causes of substances may be treated as causes of all things [αἴτια πάντων] in this sense, that when they are removed all things are removed [ἀναιρεῖται ἀναιρουμένων]; further, [F] that which is first in respect of fulfilment [τὸ πρῶτον ἐντελεχείᾳ] is the cause of all things.[139]

We are informed in the passage that one can postulate universal reasons through analogy. The passage tells us that it is possible to distinguish two cases regarding whether we can postulate common reasons for all things. In the first case [A], when the terms 'principle' and 'element' are used in several senses, that is, without taking into consideration particular principles and elements of things, we can legitimately speak of common principles and elements. In such a case, the elements, such as 'matter', 'form' and 'privation', and the 'principles', such as the efficient, the formal cause and the final cause, can be applied to every Being because we neither specify the particular element of a particular thing (e.g. the wood (i.e., the matter) of this particular table) nor do we identify the reasons proper to a particular thing (e.g. Peleus as the efficient cause of Achilles); rather, we only use these terms (i.e., 'element' and 'principle') as common notions that are applicable to every Being. In the second case [B], however, we distinguish the proper reasons and elements of things, in which case we cannot speak of universal principles and elements for special principles

'...the bone of man and the spine of fish...' *PA* I, 4, 644ab12; '...as sight is in the body, so is reason in the soul...' *EN* I, 6, 1096b25; '...as the stone is to Sisyphus, so is the shameless man to his victim.' *Rhet*. III, 11, 1412a4.

[139] *Met*. Λ, 5, 1071a29-36.

and elements of particular things are proper to things to which these principles and elements are applied. For example, the matter of this table is different from the matter of this door, and whereas the efficient cause of Achilles is Peleus, the efficient cause of Telemachos is Odysseus. [C] and [D] repeat the first case [A] as they address the possibility of postulating common principles through analogy. Hence, Aristotle seems to assume that things in the Universe can be approached through some analogical terms that are applicable typologically to reality, by way of which one can attain an actual knowledge of individuals that, nevertheless, are potentially infinite. By way of analogy, then, we can postulate common principles applicable to all that *are*.

The principles of substances are such common principles that one can apply to all things in the Universe. They are the ultimate principles of things and the highest of those principles is IS. [E] seems to be related to ontological dependence, as what it tells is that if such a principle is to be removed, all things are removed. I will be dealing with the ontological dependence after I finish with the causal connectedness so, let me proceed so as to explain [F], which, it seems to me, involve the clues for causal connectedness.

Whereas [E] addresses the ontological dependencies between substances (mentioned as one of the features of CDH that is to be met by the core item in CDH), [F] addresses the causal relations between substances. [F], in other words, points to our primary focus of attention in this part since it confirms that it is possible to regard 'that which is first in respect of fulfilment' as the ultimate cause of other Beings. What is to be understood as 'that which is first in respect of fulfilment' should be the ultimate principle of all things whatsoever, which, I think squares well with respect to what Aristotle says about IS:

> Therefore the first heavens [πρῶτος οὐρανός] must be eternal [ἀΐδιος]. There is therefore also something [ἔστι τοίνυν τι] which moves [κινεῖ] them. And since that which is moved and moves is intermediate [μέσον], there is a

> mover which moves without being moved [κινεῖ οὐ κινούμενα], being eternal [ἀΐδιον], substance [οὐσία] and actuality [ἐνέργεια].[140]

According to Aristotle, we must postulate an ultimate reason, which stands at the top of the hierarchies of Beings and which moves the subordinating celestial bodies (ESS) through a special type of movement it originates. This is what Aristotle calls the 'unmoved mover' namely, the God, who is the ultimate originator of the movement in the Universe.[141] God, in this conception, can be regarded as the efficient cause of almost everything else in the Universe because of the movement He originates: the eternal motion of the fixed stars propagates through the Universe and is actually responsible for all the generation in the Universe. Without this movement there would be no motion in the Universe and therefore no generation and corruption. Hence, the Sun, which is responsible for the changing of the seasons, is also moved by a still higher mover.[142] The hierarchies of movements end in IS, the ultimate cause of the movement, which Himself is not moving but is responsible for the eternal circular motion of fixed stars through which the movement in the Universe spreads to subordinating bodies. Since, then, IS can be regarded as the ultimate efficient cause of the whole Being, such type of substance fulfils the causal requirements of CDH, that is, the peripheral instances of Being are tied to IS in one of the four standard modes of causation.

Not only can IS be regarded as the ultimate efficient cause of the Universe, but also, by virtue of standing both as the ultimate object of desire[143] and as the ultimate good in the Universe,[144] it is a principle to which all other Beings are inclined and which they imitate, as far as their natures allow.[145] Accordingly, one might suggest that IS not only is to be regarded as the efficient cause of the Universe but also as the final principle of all things, whether eternal (ESS) or

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[140] *Met*. Λ, 7, 1072a23-26.
[141] I will not go into details on how Unmoved Mover originates a movement in the subordinating substances nor do I submit any justification for this claim. I postpone the justification of such a claim to chapter V, where I discuss in close detail the nature of God.
[142] See my discussion of the movement of the Sun and how this movement is responsible for generation on 2.4.2.
[143] *Met*. Λ, 7, 1072a26ff.
[144] *Met*. Λ, 7, 1072b19ff.
[145] *De An*. II, 4, 415a26.

not (NSS).[146] We might, then, conclude that IS fulfils the requirement of causal relations in CDH on every possible level. IS can be regarded as the ultimate efficient and final principle of the Universe,[147] which is ultimately responsible for the generation of Beings through the movement it originates and which is the final aim of all that *are* by virtue of His standing as the ultimate object of desire and love. This also sufficiently shows that we can trace causal connections between IS and the other instances of Being, which, in turn, proves that IS is indeed a suitable candidate to stand as the core item in the CDH of Being.

But, what can be said with respect to the ontological dependence? Is it possible that we affirm all substances to be ontologically dependent on IS?

Let us start with the intra-categorical level and investigate whether IS is capable of fulfilling CD that operates between substances.[148]

We have already seen that IS can be regarded as the ultimate principle in the Universe. Aristotle's description of the structure of Being that stands out in his corpus and the place of IS in this construction confirms this. This conceptualization necessitates IS being regarded as the ultimate *reason* for the permanency of the existence in the Universe.[149] IS stands at the top of the hierarchy of Beings, constructed between mere matter and pure thought that

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[146] *Met*. Λ, 7, 1072b1. I shall deal with the question whether it is possible to reduce the efficient, formal and final principles to a single principle later on, when I comment on Book Λ of *Metaphysics*. Only after that discussion, will we be in a position to clarify exactly which of the four standard modes of causation is at issue in the CDH of Being.

[147] As I have mentioned, full justification of this claim is provided the chapter where I discuss Book Λ.

[148] One should bear in mind that the discussion with respect to the ontological priority of IS cannot be fully justified on the level of Book Γ without going into details of the nature of IS, which is the subject of Book Λ, and is impossible. On the other hand, we should not avoid the present discussion because, although it may be impossible to justify all the claims made on behalf of IS, we can still make some progress to postulate the kind of substance that suits best in the CDH of Being by way of an initial sketchy conception of types of substances and by virtue of employing comparisons between them as the possible candidates for the primary term in the CDH of Being.

[149] *Met*. Λ, 7.

involves various natures composed of matter and form.[150] Aristotle's Universe is arranged so as to form a structure similar to that of a ladder, in which subordinating substances can be regarded as the substrata for higher substances that surpass and transcend these lower substances by virtue of having a higher level of actuality. In such a hierarchy, every substantial form finds the possibility of its actualization in a lower external material nature. For instance, a substance, man, for example, finds the possibility of its actualization in a mature body serving man as the material nature and the basic substratum for its higher existence. In these hierarchies of Beings, a higher form, because it has a higher actuality and richer designation, can be regarded as the rational principle, the cause of the existence of the lower form. At the ultimate end of this hierarchy, by virtue of a gradual rejection of matter and potentiality, one can arrive at a pure and simple formal substance, which is not in need of any material substratum as the basis for its existence and hence has no condition, other than itself, for the existence it enjoys.[151] This formal substance can be regarded as the highest reality (*ens realissimum*) building up the basis for all the other subordinating forms of existence and this Aristotle calls, IS, namely the God. This substance, by way of the eternal movement it originates[152] – without, however, ordinary direct contact[153] and without itself moving –[154] and by standing as the object of ultimate universal attraction and as the cosmic magnet, by virtue of the desire that it awakens in the subordinating substances, propagates itself through all the subordinating realities.[155] This prompts us to

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[150] *Met*. Λ, 7, 1072a26; 32.

[151] *Met*. Λ, 7, 1072a19-36. I will discuss the characteristics of IS somewhat haphazardly enumerated in this part, in chapter V while I discuss Book Λ.

[152] The movement of the stars and other planets must be caused by a substance unmovable in itself and eternal (*Met*. Λ, 8, 1073a34).

[153] For the operation of efficient cause by way of a direct contact, see *Phys*. III, 2, 202a3ff. This, however, will not do in the case of IS for certain reasons that will be cited in Book Λ, 7, 1072b1ff. (for a monumental exposition of these reasons one may consult Thomas Aquinas (714; n. 2529-35): 'Sed ex necessitate est, non sicut ea quae sunt per violentiam, sed necessitas eius est ipsum bene se habere, et eius movens est principium motus, scilicet ut desideratum et finis.'). For originating a movement by way of indirect means, see *GC* II, 6, 323a25; *De An*. II, 4, 415b2; 20.

[154] The activity of IS can be regarded as an *activity of immobility* (ἐνέργεια ἀκίνησίας). For this activity, see *Cael*. II, 3, 286a9; *Met*. Λ, 7, 1072b20ff.; *EN* VII, 14, 1154b27. This activity of IS should not be confused with 'making' (ποίησις); these two are articulately differentiated in *EN* VI, 4, 1140a1-23; *MM* I, 35, 1197a3ff.

[155] *Met*. Λ, 7, 1072b13-14: 'On such a principle, then, depend [ἤρτηται] the heavens [ὁ οὐρανὸς] and the world of nature [ἡ φύσις].' Cf. *De An*. II, 4, 415a26ff.

think that everything that exists in the Universe inclines towards the perfect and everlasting existence of IS as far as its nature permits.[156] In such a structure, if there were no IS, there would not be an ultimate principle on which all other Beings depend,[157] nor would there be order, for 'how is there to be order [τάξις] unless there is something eternal [ἀϊδίου] and independent [χοριστοῦ] and permanent [μένοντος]?'.[158] There would be no becoming, since becoming depends on the motion that is originated from IS;[159] nor would there be permanence of the existence in the Universe since 'if they are all destructible, all things are destructible'.[160] This structure shows sufficiently that IS is the ultimate reason for the existence of things in the Universe. The other types of substances, thus, are conditioned for the permanency of their existence to the ultimate everlasting substance, namely, the IS. This, in turn, shows us that IS is fully capable of meeting the requirements of CD in the second level, which addresses the intra-categorical dependency relations found in the category of substance.

Furthermore, while discussing whether IS is capable of meeting the requirements of causal connectedness, I mentioned that IS can be regarded as the ultimate and efficient cause of the Universe. Now, because it is the ultimate efficient cause of the Universe, besides fulfilling the requirements of CD, such a substance is fully capable of meeting the requirements of ontological dependence (OD) as well, since none of the other substances can exist in the absence of IS.[161] That means, because God's nature consists of pure actuality and He can be regarded as the ultimate efficient cause of the Universe, one can conclude that He is fully capable of meeting the requirements of both OD and CD.

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[156] *De An*. II, 4, 415a26.
[157] *Met*. Λ, 7, 1072b14.
[158] *Met*. K, 2, 1060a26.
[159] *Met*. Λ, 6, 1072a10.
[160] *Met*. Λ, 6, 1071b3.
[161] Cf. *Met*. Λ, 6, 1071b3-6.

So far, I have only inquired into the ontological dependence relations between IS and other substances, i.e. between intra-categorical relations. What can be said, however, about the first level in ontological dependence that addresses the inter-categorical dependency relations between substance and the other so-called secondary categories?

It is not immediately clear how IS will be the cause of the existence of so-called secondary categories. After all, it is not easy to affirm that IS has certain quantity, quality, relation etc., which implies that these secondary categories owe their Being not to IS but to NSS (or ESS), as they rightfully manifest themselves in such substances rather than IS. The framework I have presented so far, however, may assist us in making some progress on this question. So far, we have seen that IS meets the conditions requires for ontological dependence at the intra-categorical level. We have additionally seen that the inter-categorical relations in ontological dependence are fully met by sensible substances whether eternal or not. Now, the problem seems to emerge only if we place IS in the former requirement, namely, the requirement of ontological dependence between so-called secondary categories and IS. Can we not, however, say that, in fulfilling the second level in ontological dependency, the IS *also* fulfils the first level in such relations, at least indirectly? Since the existence of NSS and ESS are conditioned to the existence of IS, and since the existence of secondary categories is conditioned to composite substances of all kinds (i.e., NSS and ESS), one can, I believe, rightly infer that IS is the actual reason for the existence of the secondary categories on the basis of the simple fact that all Beings are actually conditioned to IS. What I claim, therefore, is that the ontological dependence initially works between intra-categorical relations, that is, between IS and the other types of sensibles and by virtue of this it also works secondarily between inter-categorical relations between sensible substances and the other so-called secondary categories. In this interpretation, by virtue of standing as the ultimate reason for the existence in the Universe, IS can be regarded as the primary reason for the existence of the secondary

categories as well. This implies that IS fulfils the requirements of ontological dependence on the first level as well.

My analysis so far has shown that nothing in Aristotle's conceptualization of IS is incompatible with the ontological dependence and causal connectedness features that are required for constructing the CDH of Being. Rather, it seems that IS is the most suitable candidate to stand as the core item in the CDH of Being since such substance meets these requirements far better than the other types of substances.

This argument shows us that if we had only inter-categorical relations in CDH of Being operating between secondary categories and the category of substance, then the science of Being would not be a *universal* inquiry into Being simply because it would not be able to study God. In order to attain the required unity of the science of Being despite the multiplicity of Being, we must have a unique structure that paves the way for unity through a core item. This is supplied in Book Γ and it works in two levels, that is, between inter-categorical and intra-categorical relations. If we were not to accept the intra-categorical relations operating in the CDH of Being we would not be able to have a universal science of Being simply because in such circumstances, God, who is the most proper candidate for being the core item in the CDH of Being would be excluded from the system.

2.5. Conclusions

We have seen that Aristotle's effort in establishing the CDH of Being proceeds against the background of Platonism, which would have prevented him establishing several special sciences along with the universal science of Being. Having rejected the view that Being has a single synonymous sense, as Plato had been espousing, Aristotle finds himself in an *aporia* with respect to the unity of the science of Being. Much of his effort in Book Γ can be gauged against this background, that is, to overcome simultaneously the problem of the over-

comprehensiveness and the unity of the science of Being. He effectively constructs the foundations of the science of Being by virtue of a special kind of homonymy, namely, the CDH, which provides him with sufficient grounds to overcome the puzzles that he must resolve in any event in order that he can structure the science he seeks to establish in *Metaphysics*. Aristotle reaches his aim in establishing the science of Being by assigning substance as the primary concern of this science and by forming a framework that helps him to cluster the other instances of Being around the 'core', by virtue of which he manages to attain some kind of unity among several homonymous instances of Being.

This much must have appeared to be sufficient for Aristotle's aims in Book Γ to establish the grounds of the science of Being through the CDH, so that he does not seem to be willing to spend any effort to detail what kind of substance that has been said to be the primary concern of metaphysician, merits being the core item in the CDH of Being. Book Γ, therefore, solely seeks to establish the background against which the science of Being will later be established. Once, however, we have distinguished the types of substances according to what Aristotle has told us elsewhere in his corpus, we have the opportunity to commit a provisional assessment of the best referent of what Book Γ has quite ambiguously stated as 'substance' as the core item in the CDH of Being. That assessment, in turn, shows that we have good reason to suggest IS, namely, God, as the core item in the CDH of Being for this, as we have seen, is capable of meeting the requirements of CDH that stands out from the examples given in Book Γ better than the other possible candidates, namely, the NSS and ESS. Need there be any surprise, then, if we encounter a theological conceptualization of the science of Being in later stages of Aristotle's inquiry? As we have seen so far, nothing in Book Γ seems to contradict such a theological conception, seeing that what we are told with respect to the CDH of Being in no way prevents us placing IS at the centre of the study of Being.

According to Aristotle's declarations in Book Γ, the prime subject matter of the science of Being is, therefore, substance, through which the several other

instances of Being are studied by virtue of the structural aid provided by CDH. This, study, as Aristotle records, is a genuine study into Being, marked by what Aristotle calls the study of 'Being qua Being':

> There is a science [ἐπιστήμη] which investigates [θεωρεῖ] being as being [ὂν ᾗ ὄν] and the attributes which belong to this in virtue of its own nature [καὶ τὰ τούτῳ ὑπάρχοντα καθ᾽ αὐτό].[162] Now this is not the same as any of the so-called special sciences; for none of these others deals generally with being as being [καθόλου περὶ τοῦ ὄντος ᾗ ὄν]. They cut off [ἀποτεμόμεναι] a part of being and investigate the attributes [τὸ συμβεβηκός] of this part- this is what the mathematical sciences for instance do.[163]

Aristotle contrasts the science of Being with the so-called special sciences in terms of their subject matter; the former science of Being deals universally with Being, the latter so-called special sciences deal with a part of Being. We have already seen that the reason for this lies upon the grounding structures upon

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[162] i.e. καθ᾽ αὐτό (per se) attributes of Being. Note that according to Aristotle there are several senses of 'per se' (See *An. Post.* I, 4; *Met.* Δ, 18) of which two are significant. An attribute is linked to a subject in per se-1 way if it is involved in the definition of that subject (*An. Post.* I, 4, 73a34; *Met.* Δ, 18, 1022a25) e.g. 'animal' is a per se-1 attribute of Callias since it is present in the formula that defines him; that is, Callias is a particular animal. Again, plot (μῦθος) can be regarded as a per se-1 attribute of a tragedy (*Poet.* 6, 1449a24) since it can be regarded as an inseparable constituent element involved in the definition and nature of a tragedy. In per se-2 one should focus on the definition of the attribute connected to the subject rather than the definition of the subject. In this case, the necessary reference to the subject makes it possible for the attributes to be defined. In other words, the attribute is no longer involved in the description of the subject; rather, the subject itself is involved in the definition of the attribute. Hence, an attribute y belongs to a subject x in per se-2 way, if the subject x is mentioned in the account of what y is (see *An. Post.* I, 4, 73a37). For instance, 'odd' and 'even' are *per se*-2 attributes of 'number' as they refer to 'number', by way of which they are defined. Similarly, 'straight' and 'curved' are per se-2 attributes of 'line' since their definition necessarily involves the utterance of 'line' (cf. *De. An.* I, 1, 402b20). In the same manner, 'whiteness' pertains to 'surface' in a per se-2 way (cf. *Met.* Z, 4, 1029b16). The most frequent example given by Aristotle to illustrate this sense of *per se* is a triangle whose interior angles are equal to two right angles (*Top.* II, 3, 110b22; *De An.* I, 1, 402b20; *PA* I, 3, 643a30; *Met.* Δ, 30, 1025a30). Per se-2, therefore, is very similar to *propria* (ἴδιον), which is defined thus: 'A property [ἴδιον] is something which does not indicate the essence of a thing, but yet belongs to that thing alone, and is predicated convertively [ἀντικατηγορεῖται] of it' (*Top.* I, 5, 102a17). (For the passages where Aristotle uses *propria* in a similar way to per se-2, see *Phys.* III, 1, 200b24; *De An.* I, 1, 402a9; *SS* 1, 436a4; *OS* 2, 455a13; *OD* 1, 458b6.) The properties of a subject are those that are strictly peculiar to that subject; for instance, learning grammar is a property of man and to use the nostrils as a hand is a property of elephants (*PA* II, 16, 658b33). These can be contrasted with common attributes shared by many subjects. (For *propria* as the opposite of 'common attributes', see *De An.* II, 3, 414b24; *SS* 1, 436a4; *OS* 2, 455a13; *OD* 1, 458b6; *EN* III, 11, 1118b9; *Pol.* III, 4, 1276b24; *Econ.* II, 1, 1345b18). It is noticeable that the relationship between the subject and per se-1 attributes is a more rigid type of relationship compared with that of per se-2, which is more general and flexible.
There is a certain similarity between 'qua' phrases and *per se*. To study Being qua Being is to study Beings as far as they are necessarily and universally Beings, which in turn – according to *Posterior Analytics* (I, 4, 73b26-74a3) – amounts to saying that it is to study Being in itself and as such (i.e., *per se*). For this resemblance, see Owens (1951), pp. 260; Wilson, pp. 8-9; 17-18.
[163] *Met.* Γ, 1, 1003a20-26.

which these two types of sciences are established. We have seen that the so-called special sciences are constructed upon ordinary *kata hen* structures, where the scope of science is limited to the genus it aims to reveal, whereas the science of Being is constructed upon a CDH, which allows for several genera to be studied by a single science, without thereby losing the unity required to be attained by any science. The necessary relations found between instances of CDH, therefore, pave the way for a study to spread beyond intra-categorical relations through an inter-categorical investigation. By virtue of the CDH, as we have seen, we do not need to limit our inquiry to the scope of a single genus in case we lose the unity of the scope of the science in question. This structure allows Aristotle to establish a universal science of Being that studies many manifestations of Being through a unified study.

Though special sciences deal with Being, none of them deals with Being qua Being.[164] For instance, physics deals with Beings, nevertheless it investigates those Beings inasmuch as they are moving, that is, qua moving or, again, biology deals with them qua living and mathematics qua some certain quantity. Similarly to these sciences, the science of Being also deals with Beings, but not inasmuch as they are moving or living or some other determination postulated by the genus in question, but inasmuch as they are Beings; that is, it deals with Being qua Being. That is why Aristotle affirms that 'none of these others deals generally with being as being'.

According to this conception, the science of Being will study Being qua Being, which is to study what it is for something to be. Book Γ has sufficiently shown that the only way to commit such an inquiry into Being qua Being is through the structure provided by CDH. In accordance with the necessary relations found between the instances of CDH, in studying the primary instance of Being

[164] Many commentators have inquired into what it is to be understood by the term 'Being qua Being'. See, for instance, Alexander of Aphrodisias, IV, 239:5-240:30; Syrianus, IV, 54:16-55:16; Thomas Aquinas, p. 150, n. 530; p. 151, n. 532; Suárez, IV, 1, pp. 68-9; Grote (1872), p. 302; Marx (1954), pp. 22-9 (cf. p. 35); Jaeger (1962), pp. 215-23; Owens (1951), ch. VII; (2007), pp. 50-3; pp. 66-9; Leszl (1975), p. 30ff.; p. 383 (cf. p. 386ff.); Reale (1980), p. xxvii; p. 117; pp. 143-146; p. 421; Cleary (1994), pp. 67-9; Irwin (2002), pp. 170-172.

one can attain knowledge of the peripheral instances as well. Such a structure necessarily requires that we regard the highest instance of Being as a primary term, since only this highest instance can realize the requirements of CDH in full. If we were to accept a secondary instance as the primary term of CDH of Being, however, the investigation could not spread through the peripheral elements that cannot be linked to such a secondary instance in three of the requirements of CDH, which would result in the exclusion of these parts from the realm of the study in question, which would not, in turn, yield a universal study of Being. Only in this way, that is through the primary instance of Being, would the universal inquiry into Beings qua Beings be possible. To study what it is for something to be, that is, to study Being qua Being, falls into the responsibility of a metaphysician who articulates the manner in which things *are*, as well as their ontological status. In this way, therefore, a metaphysician studies Being qua Being, that is, he commits his inquiry through the primary instance of Being by virtue of the structure provided by CDH. This seems to be exactly what Aristotle maintains in Book E:

> [A] One might indeed raise the question whether first philosophy [πρώτη φιλοσοφία] is universal [καθόλου], or deals with one genus [περί τι γένος], i.e., some one kind of being [φύσιν τινὰ μίαν]; for not even the mathematical sciences are all alike in this respect, – geometry and astronomy deal with a certain particular kind of thing [περί τινα φύσιν εἰσίν], while universal [καθόλου] mathematics applies alike to all. [B] We answer that if there is no substance other than those which are formed by nature [φύσει συνεστηκυίας], natural science [ἡ φυσικὴ] will be the first science [πρώτη ἐπιστήμη]; [C] but if there is an immovable substance [οὐσία ἀκίνητος], the science of this must be prior [προτέρα] and must be first philosophy [φιλοσοφία πρώτη], and universal in this way, because it is first [καθόλου οὕτως ὅτι πρώτη]. [D] And it will belong to this to consider being qua being – both what it is [τί ἐστι] and the attributes which belong to it qua being [τὰ ὑπάρχοντα ᾗ ὄν].[165]

I find this passage extremely important on behalf of what I have been claiming so far in this chapter. What I want to draw attention to is that, having placed the puzzle concerning the science of Being in [A], the solution that Aristotle seem to espouse in [C] with concision remarkable even for him is quite similar to the one that I have suggested throughout this chapter.

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[165] *Met*. E, 1, 1026a23-32.

Aristotle's views can be unpacked as follows. To begin with, as Aristotle immediately points out in [A], one can indeed observe a puzzle concerning the scope of the science of Being. He encapsulates this puzzle by stating that one may be tempted to ask whether the science of Being is a universal study of all things that *are*, or should be considered as a science dealing with a particular nature (φύσιν τινὰ μίαν), in this case, the IS. He immediately refers to mathematical sciences in order to illustrate further the puzzle concerning the science of Being, stating that these too have different levels of universality. Geometry and astronomy, for instance, have different levels of universality: whereas the former deals solely with planes, which is one type of quantity among others, the latter deals additionally with space. Beyond these, there is universal mathematics (τὴν καθόλου μαθηματικήν),[166] which deals with the highest principles of mathematics, and therefore certainly has a greater scope than the aforementioned types of mathematical sciences. The case of mathematics can be associated with Being; just as the universal science of mathematics that studies the highest principles of mathematics is universal among the mathematical sciences, so the science of Being, through studying the highest principles of all things that *are*, is the most universal amongst all the other sciences.

In [B] Aristotle states that if there were no substances other than non-eternal sensibles (NSS), physics would be the highest science. This is indeed true, because if in the scale of Being there were no eternal sensible substances (ESS) and IS, NSS would be the highest among all other Beings, and physics, by virtue of studying these highest instances, would be the highest among other sciences. In such a case, in other words, physics would correspond to the 'universal science of mathematics' in the analogy given in [A]. We have seen that NSS are capable of fulfilling the requirements of CDH on a very limited level, that is, the level of sensible substances, but such substances cannot be regarded as prior to

[166] Bonitz (1849, p. 285) believes that τὴν καθόλου μαθηματικήν refers to arithmetic (just as Thomas Aquinas does; see p. 156, n. 563). Ross, however opposes him by accepting that the science meant here is a general one dealing with every possible quantity and so has even wider scope than arithmetic (1924, I, pp. 356-7). In terms of what I wish to maintain in this part, whether arithmetic or universal mathematics is meant does not matter.

ESS nor are they prior to IS, nor still can they be regarded as proper causes of higher substances (i.e., ESS and IS). What Aristotle states in [B], then, amounts to saying that if these ESS and IS were not to exist, NSS would fulfil the requirements of CDH in full and therefore the science that studies such substances would be the first (and universal through the necessary connections found in CDH) among others. Given that Aristotle's system involves substances of necessity that are higher than NSS, what we have been told in [B] is not a probable result and, I think, Aristotle's reason for pronouncing [B] is purely rhetorical, it might be spelled out just to emphasize his solution to the puzzle concerning the science of Being in [C].

Contrary to the view pronounced in [B], in [C], Aristotle claims with a special emphasis on IS (οὐσία ἀκίνητος) that there are indeed higher substances and, rather than physics, the science that deals with IS should be regarded as the first among other sciences. As I have mentioned, this is imperative when one considers the structure of CDH and the required relations between such structures upon which the science of Being is established. According to the schema provided by CDH, only the science dealing with the highest instance of Being, namely IS, can fulfil the requirements of CDH in full. Other possible instances, however, are conditioned to still a higher substance, which shows that study of these instances will not give any information about these higher instances but vice versa. All the possible instances of Being (whether NSS or ESS) are capable of being linked necessarily to IS, as I have shown. If, then, a science is to study Being as a whole, it should focus on IS, given that only such a substance is suitable to stand as the primary element in the CDH of Being. By way of this fulfilment, I mean, by the necessary connections, grounding the causal structure of CDH, the study propagates through the other instances as well. Therefore, by virtue of dealing with the primary instance of Being, which is capable of meeting the requirements needed to establish necessary connections between all instances of Being, the science of Being turns out to be a universal science. Were it not to deal with the highest instance of Being, it would not be universal either. That is what we can extract from Aristotle's

statement that the science of the highest is universal, because it deals with the first instance of Being, namely, God. In [C], therefore, Aristotle seems to address what I have claimed through the course of this chapter, that once we have the types of substances, only one of them, the first, will prove to be the core item in the structure established in Book Γ, whereby the universal science of Being is established. Hence, a combination of the types of substances revealed in the Aristotelian corpus with the structure established in Book Γ with respect to the CDH of Being shows that nothing that we have been told in Book Γ is incompatible with the theological conception of the science of Being.

In [D] Aristotle states that the aforementioned science of Being, which executes a universal study of Being through investigating the prime instance of Being, should be the one that studies Being qua Being. To study Being qua Being, that is, to study what it is for something to be, is possible only through the special kind of structure offered in Book Γ, which necessitates that this study can only be pursued through the study of a core item that is necessarily prior in every possible way. To study that item, in turn, will lead to knowledge about things in so far as they are Beings. This is indeed a universal study of things, but such a study can only be executed by way of a core that is prior in an absolute way. This study will inquire into things as far as they are Beings; it will study what it is for them to exist and hence, will involve an investigation of the level and the manner of existence of things in the Universe. It will determine the ontological statuses and mode of the existence of things through inquiring into the primary instance of Being, that is, Being *par excellence*. One may be tempted to subscribe to the view that we can indeed have some information about whether things exist and how they exist without, however, having any knowledge with respect to the primary instance of Being. This view is correct, for nothing prevents us gaining some kind of information about Being. However, if this information is to be turned into a unified scientific knowledge, one should trace the patterns offered in Book Γ. That pattern provides the possibility of a universal study through the necessary connections found between the core item and the non-core instances of Being.

Studying the level of existence of things, the manner of their existence, their elements in so far as these elements are Beings, the status of their essences and the ultimate principles to which all these Beings are necessarily linked, is what it means to study Beings qua Beings, that is, to study what it is for these things to be, and such a study can only be executed by virtue of inquiring into the first instance of Being, which is constructed upon a special structure provided in the text of Book Γ, namely, CDH. Once one distinguishes several types of substances, one will see that nothing that is established in Book Γ is incompatible with the theological view that stands out in other treatises of *Metaphysics* rather, it seems upon reflection that the structure offered in Book Γ motivates strongly that we find a harmony between the several stages of Aristotle's establishment of the science of Being.

Finally, I want to point out that my claim can further be confirmed by a passage in Book Γ, which involves what I want to call the 'parts of philosophy argument'. In order to understand this argument, let me first turn to an *aporia* stated in Book B against which this argument proceeds:

> In general, do all substances fall under one science or under more than one? If the latter, to what sort of substance is the present science to be assigned? On the other hand, it is not reasonable [οὐκ εὔλογον] that one science should deal with all [πασῶν]. For then there would be one demonstrative science [ἀποδεικτικὴ] dealing with all attributes [τῶν συμβεβηκότων].[167]

The *aporia* is structured upon the question that it is difficult to decide whether the science of Being deals with all substances or with a single substance. If the former alternative is taken, we should be forced to accept a single giant science of Being covering all types of substances. This view, which is very similar to the one that Plato arrives at, as I have already mentioned, is what Aristotle wanted to distance himself from on the grounds of some epistemological reasons peculiar to his philosophy. If we accept the latter alternative, however, that the science of Being deals with a single substance, it will still be difficult to decide which of the several types of substances (NSS, ESS or IS) should be studied by

[167] *Met*. B, 2, 997a15-19. Cf. *Met*. B, 1, 995b10-13; K, 1, 1059a26-29.

the science in question. If the interpretation I suggest is right, then Aristotle should take this alternative and decide for IS as the basic focus of the science of Being.

Indeed, Aristotle seems to provide an answer to this puzzle as he attempts to solve it in a passage from Book Γ by stating that 'there are as many parts of philosophy (μέρη φιλοσοφίας) as there are kinds of substance (ὅσαι περ αἱ οὐσίαι), so that there must necessarily be among them a first philosophy (πρώτην) and one which follows this'.[168] According to this line of thought, different kinds of substances fall under the umbrella of different sorts of philosophy. Among these philosophies, one of them is first (i.e., first philosophy) by virtue of dealing with the first type of substance, which, as we have seen, can be nothing but IS. The second philosophies follow it, as they deal with the other types of substances, e.g., astronomy, which deals with eternal sensible substances (ESS).[169] The view that the science of Being investigates all types of substances is therefore ruled out, according to the textual evidence. Later, we shall see in Book E that a similar differentiation of philosophies into several types will be executed on the grounds that these philosophies deal with different types of substances.[170]

This, therefore, seems to be the view Aristotle espouses in Book Γ, and nothing in this conception is incompatible with the theological conception of the science of Being that we encounter in later stages of his treatise. His explicit pronunciation of God as the prime focus of investigation for the science of Being in later parts of *Metaphysics*,[171] and his initial affirmation in Book A that God should be regarded as the ultimate concern of the 'science we seek',[172] is not thereby incompatible with what he establishes in Book Γ to provide a grounding structure for the science of Being, that is, the CDH. These remarks

[168] *Met*. Γ, 2, 1004a2-4.
[169] This is confirmed explicitly in Book Λ: '... mathematical sciences which is most akin [οἰκειοτάτης] to philosophy – viz. of astronomy; for this science speculates about substance which is perceptible [αἰσθητῆς] but eternal [ἀϊδίου]...' *Met*. Λ, 8, 1073b4.
[170] *Met*. E, 1, 1026a10-19. I shall discuss this passage in close detail in the next chapter.
[171] See, for instance, *Met*. E, 1, 1026a9; Λ, 7.
[172] *Met*. A, 2, 982b10.

on Book Γ do not amount to a full explanation of Aristotle's argument here, let alone a justification of the way Aristotle does argue. But it seems to me that this must be the direction Aristotle's argument takes.

Insisting on the view that Book Γ strictly supports a non-theological science and to provide explanations for Aristotle's philosophical development on historical and philological grounds will produce more problems than it seeks to resolve. My interpretation, on the other hand, makes Book Γ fit with the rest of *Metaphysics*, including Book Λ without any peculiar philological or historical speculation. I will accordingly trace the science of Being in the other treatises of *Metaphysics* in the light of what I have so far proposed and will provide additional support for my theological approach to the science of Being, whereby I intend to prove my hypothesis in full with respect to IS being the primary element of the CDH of Being.

CHAPTER III

3.1 Introduction

The notable feature of Book E is Aristotle's constant effort to differentiate first philosophy from the other sciences. As a consequence of this effort, Aristotle manages to draw the limits of three basic theoretical sciences by determining their relative place in the whole epistemological structure. His major aim, which is to determine the actual frontiers of the science of Being, is not an easy task. Given the background of Book Γ and Aristotle's own criteria, which he uses to differentiate this science from the other theoretical sciences in Book E, it seems, at least in the first instance, that the content and subject matter of the science of Being are debatable. Indeed, one may be tempted to argue that in Book Γ Aristotle is inclined to think that metaphysics is general science of Being (*metaphysica generalis*). This inclination continues in the opening sentences of Book E, where Aristotle says that metaphysics does not study a particular restricted genus as the other sciences do. Although Aristotle seems to be clear in his tendency towards a general science of Being, in the later passages of Book E he informs us that this science deals with the highest instance of Being, and that the science of Being should be regarded as theology (*metaphysica specialis*). What is the connection, if any, between them? Aristotle does not say.

Unsurprisingly, and for good reason, the relationship between Book Γ and Book E has long puzzled scholars. Often, scholars find these two texts irreconcilable; what Aristotle does in Book E, according to such a view, is to establish a special science dealing with a particular kind of Being, in this case, God, whereby it can rightly be called 'theology' whereas in Book Γ, Aristotle's aim is to establish a universal science of Being dealing with all departments of Being without any limitation whatsoever. Jaeger, for instance, strongly emphasized the contradiction between the conceptions of the science of Being in these two treatises:

> But now this determination of the nature of metaphysics purely by means of its subject-matter, namely unmoved and transcendent being, makes it one special science among others. Whereas elsewhere it is considered as the universal science of being as such, and sharply contrasted with the sciences that examine only a special kind of being (ὄν τι καὶ γένος τι), here it is itself merely the knowledge of the highest kind of being (περὶ τὸ τιμιώτατον γένος). Its object is said to be being of this kind (τοιαύτη φύσις), and it is to be looked for in a particular genus of reality, namely in the cosmic region of what is visible but imperishable. The contradiction is undeniable[1]

According to Jaeger, Book E limits the subject matter of the science of Being into what is imperishable and unmoved. This however sharply contradicts the description of the science of Being that we encounter in Book Γ, according to which the science of Being deals with all departments of Being. The universal science of Being cannot be reconciled with the special theology of Book E.

Other scholars have challenged this view and attempted show the reconcilability of the conceptions of the science of Being in Book E and Book Γ.[2] The proponents of the latter view have tried to show that in dealing with the first instance of Being, that is God, the science of Being turns out to be a universal inquiry into Being. Most recently, Frede has attempted to show the reconcilability of Book E and Book Γ. According to him, the science of Being studies 'a way of Being' of divine substances to which other 'ways of Being' depend so that in studying divine substances, the science of Being turns out to be a universal inquiry into Being.[3]

The supporters of the latter view claiming that the conceptions of the science of Being in Book E and Book Γ are reconcilable, I think, do not offer satisfactory explanation for their stance, most significantly because they do not explain how it is that the criteria employed to establish the science of Being in Book Γ parallel exactly the criteria put forward in Book E. In Frede's view, for instance, one might be puzzled as to how in fact one is to reconcile Aristotle's explicit assignment of the study of 'what it is' and 'if it is' to the science of Being with

[1] Jaeger (1962), p. 217.
[2] See introduction for a discussion of the proponents of this view.
[3] Frede (1987b).

the previously held criteria of the science of Being that we encounter in Book Γ. The effect of the two tasks of the science of Being, namely, 'what it is' and 'if it is', on its subject matter, that is, 'way of being' of eternal substances is not clear in Frede's proposal. Furthermore, it seems that Aristotle's two further criteria put for forward in Book E, namely, separation and immovability, denote determinate substance, that is, God, rather than a 'way of Being' of divine substances. Hence, these two criteria that are introduced in Book E show that it is exactly with the God that the science of Being must concern itself rather than a 'way of Being' of divine substances. These gaps undermine Frede's argument about the reconcilability of the conceptions of the science of Being in Book Γ and Book E and for this reason, they need to be filled up for a more satisfactory answer to the puzzle of reconcilability. In order to give a satisfactory answer to the question of reconcilability one must accordingly show the absolute parallelisms between the criteria upon which the science of Being established in Book Γ and the criteria assigned to the science of Being in Book E.

Aristotle's enterprise in Book Γ was focused on establishing a universal science of Being, which studies Being qua Being. The conception of Being as a core-dependent homonym (CDH) prepares the ground for a unified study of Being even though Being is not a genus. The question that I shall be dealing with in this part is whether this conception of the science of Being that we encounter in Book Γ parallels what is espoused in Book E. In the latter, Aristotle proposes some further criteria upon which the science of Being is established. He assigns the study of 'what it is' and 'if it is' to the science of Being and determines the subject of this science as what is 'immovable' and 'separate' whereby he differentiates the science of Being from the other theoretical sciences (i.e. physics and mathematics). The question then arises whether we can find a relation between these criteria and the criteria that Aristotle has hitherto established in Book Γ.

3.2. 'What it is' (τί ἐστιν) and 'If it is' (εἰ ἔστιν): Differentiation of Metaphysics from the Other So-called Special Sciences

In this part, I shall concentrate particularly on two tasks of the science of Being, both rather peculiar on the face of it, by way of which Aristotle constructs the basis of a possible differentiation of this science from the other so-called special sciences, and later relate these two tasks to the previously encountered conception of science of Being in Book Γ. The reconciliation between Book Γ and Book E is brought to the surface if one reads Book Γ in the way I suggest, that is, such that the science of Being is established upon three criteria, namely, ontological dependence, logical dependence and causal connectedness. This reading, as I shall show throughout this chapter paves the way for a clean reconciliation between the conceptions of the science of Being in Book Γ and Book E.

To this end, we might wish to understand better the two tasks, namely, the study of 'what it is' and 'if it is', claimed to be attributed to the science of Being in Book E. Accordingly, I shall first offer an assessment, seeking to improve our understanding of these tasks. Later, after setting the backdrop against which an evaluation of whether these tasks are reconcilable to what has been previously established in Book Γ can be grasped, I will attempt to relate these tasks to the criteria upon which the CDH is established in Book Γ.

According to what we have been told in Book E, no science deals with the 'what it is' and 'if it is', that is, the essence and existence, of the subject genus it studies. Instead, the special sciences *assume* the essences and existences of their subject genera by way of perception or hypothesis, for which reason they are not tasked with demonstrating the essence and existence of their subject matter. The idea that every science presupposes some previous knowledge has its roots in *Posterior Analytics*, and I will refer to this text frequently in my reading of this section of *Metaphysics*. Accordingly, my initial concern in this part will be to understand (1) what is implied by the terms 'what it is' and 'if it is'; (2) why the

study of them is assigned only to the science of Being in Book E; and (3) how it is possible, in accordance with what we have been told in Book E, that the study of 'whatness' and 'ifness' belongs to the same intellection, as well as the implications of such a claim for the role of theology in Aristotle's conception of the science of Being.

In the opening lines of Book E, Aristotle carefully distinguishes the science of Being from the other sciences. The differentiation is made on the basis of the different scopes that these sciences focus on:

> [A] We are seeking the principles and the causes [αἱ ἀρχαὶ καὶ τὰ αἴτια] of the things that are [τῶν ὄντα], and obviously of things *qua* being [δῆλον δὲ ὅτι ᾗ ὄντα]. For there is a cause of health and of good condition, and the object of mathematics have principles [ἀρχαὶ] and elements [στοιχεῖα] and causes [αἴτια], and in general every science which is ratiocinative [διανοητικὴ] or at all involves reasoning [μετέχουσά τι διανοίας] deals with causes and principles, exact [ἀκριβεστέρας] or indeterminate [ἁπλουστέρας]; [B] but all these sciences mark off some particular being [περὶ ὅν τι] –some genus, and inquire into this, but not into being simply [περὶ ὄντος ἁπλῶς] nor *qua* being, [C] nor do they offer any discussion of the essence [τί ἐστιν] of the things of which they treat; but starting from essence – some making it plain to the senses [αἰσθήσει ποιήσασαι], others assuming it as a hypothesis [ὑπόθεσειν λαβοῦσαι] – they then demonstrate [ἀποδεικνύουσιν], more or less cogently, the essential attributes of the genus [τὰ καθ' αὐτὰ ὑπάρχοντα τῷ γένει] with which they deal. It is obvious, therefore, from such a review of the sciences, that there is no demonstration of substance [οὐκ ἔστιν ἀπόδειξις οὐσίας] or of the essence [τί ἐστιν], but some other way of revealing it [ἀλλά τις ἄλλος τρόπος τῆς δηλώσεως]. [D] And similarly the sciences omit the question whether the genus with which they deal exists [εἰ ἔστιν] or does not exist, [E] because it belongs to the same line of thought [τῆς αὐτῆς εἶναι διανοίας] to show what it is [τί ἐστιν] and that it is [εἰ ἔστιν].[4]

This passage neatly encapsulates the essential differences between the science of Being and the other sciences. It starts [A] with an implicit reference to previous discussions in Book A and Book Γ; in Book A, Aristotle established 'Wisdom' as the science of the ultimate principles and causes, while in Book Γ he has constructed CDH upon which the science of Being is established and added 'Being qua Being' into this conception. This conception continues, now with a more systematic enterprise of differentiating the science of Being from other sciences and establishing the frontiers of this science. [B] The 'universality' of the science of Being in contrast to the 'particularity' of the other

[4] *Met*. E, 1, 1025b2-17.

sciences provides the basis for picturing the fundamental differentiation between this science and the so-called special sciences. This conception, in turn, finds its basis in Aristotle's assertion that no science deals with [C] the essence (i.e., 'what it is' [τί ἐστιν]) and [D] existence (i.e., 'if it is' [εἰ ἔστιν]) of its subject genus. Finally, [E] Aristotle informs us that the study of 'what it is' and 'if it is' belongs to the same type of intellection [τῆς αὐτῆς εἶναι διανοίας]. I investigate [A] in detail at the end of this chapter, where I also discuss [B] (i.e., the universality of the conception of the science of Being in Book E). This section is thus limited to [C], [D] and [E].

3.2.1. 'What it is' (τί ἐστιν)

The basis of the idea that every science assumes the essence of its subject genus might be found in Aristotle's famous assertion that 'all teaching and all learning of an intellectual kind proceed from pre-existent knowledge'.[5] Sciences, in other words, proceed from some principles that cannot be demonstrated by the very same science in question. In this conception, every science *assumes* some principles and establishes its body upon this pre-existing knowledge of principles. In *Posterior Analytics*, Aristotle explicates the basic features of these principles according to which they must be true (ἀληθῶν), primitive (πρώτων), immediate (ἀμέσων), more knowable (γνωριμωτέρων) and prior (πρωτέρων).[6] These features accentuate strongly enough that it is impossible to demonstrate at the same time the principles and the conclusions derived from these principles within the scope of the very same science. Hence, the study of principles and the conclusions relying on those principles belong to different kinds of intellection, but what are these principles?

One might appeal to *Posterior Analytics* in order to find an answer to this question as well. In every science, there are at least three principles, without

[5] *An. Post.* I, 1, 71a1 ('πᾶσα διδασκαλία καὶ πᾶσα μάθησις διανοητικὴ ἐκ προυπαρχούσης γίνεται γνώσεως').
[6] *An. Post.* I, 1, 71b20. Owing to space limitations, I cannot discuss these features here, even though they would probably produce intriguing results in terms of Aristotle's overall conception of science.

which no science can operate:[7] the definitions, the common axioms and the genera that are studied by the specific science in question. According to this conception, every science assumes some definitions of its basic subject matter and derives its conclusions from some common axioms that are also external to the scope of the very same science. Furthermore, these sciences are incapable of determining their subject genera; hence, they assume these pre-determined subject-genera, within the scope of which they carry out their study. What is interesting in this conception is that the particular sciences cannot define the basic terms of their subject matter. I deal with this rather peculiar characteristic of Aristotelian science later in the chapter. Besides this, this conception is particularly interesting for it implies that there should be at least one science investigating the definitions and the common axioms. It seems that this same science should also determine the basic genera of particular sciences, otherwise these principles remain unstudied and unknown, which is clearly an unhappy result for a conception of a science that is in every way based on principles such as definitions, common axioms and the genera. We might not, however, need to be troubled for such an upshot for, according to what we are told in Book Γ, the common axioms are studied by the science of Being and they do not remain unknown. In the very same book, however, namely, in Book Γ, there were no indications that the science of Being studies the definitions[8] let alone any implications that it determines the basic genera of the other special sciences. Hence, given the background of *Posterior Analytics*, it is quite natural that one might expect Aristotle to say something about definitions of basic concepts and the determination of genera of sciences. With this expectation in mind, one may reasonably ask whether there is a connection between Aristotle's assignment of 'what it is' to first philosophy in Book E and the conception of science in *Posterior Analytics* that I have roughly described. The answer to this question requires a precise determination of what Aristotle means by 'what it is', and it is on this that I will now focus.

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[7] *An. Post.* I, 2, 72a5-24; X, 76a31-77a4.

[8] Except in 1003b34, where Aristotle declares that the essence of species of unity and Being (e.g. concepts such as same and similar) should be studied by a single science. Here, however, he does not systematically establish that the definitions are to be included in the scope of first philosophy.

Even a rough examination of the meaning of 'what it is' in the Aristotelian corpus will show that Aristotle mostly uses it when he discusses definition.[9] This is supported in actual practice, since he always explicates and investigates the definition of something when he constructs questions of the form 'what is ...?'. This type of question always asks the technical definition of something.[10] Since a definition is constructed upon the necessary connections between the subject and predicate, Aristotle sometimes refers to 'what it is' as a necessary attribute of the subject defined. Accordingly, one might not be surprised when one says what is predicated of a subject in 'what it is' is a necessary attribute of that subject.[11] The claim that 'what it is' as a necessary attribute is also justified when Aristotle contrasts this term with the accidental attributes of a subject.[12]

In determining what these necessary attributes actually are, it would be useful to have a rough conception of how Aristotle establishes definitions.[13] Aristotle's discussions of this subject illustrate that every definition involves three constituents; a subject (i.e., species), a genus, and a differentia. For instance, in 'man is a rational animal', 'man' refers to the subject (which also refers to the species), whereas 'animal' refers to the genus and 'rational' to the differentia. In every definition, the differentia divides genus into atomic species. These three constitute the 'whatness' of something by positioning a subject into the hierarchies of kinds under which every particular thing is placed. A multiplicity of individuals cannot be placed under an infinite number of kinds, or else it

[9] For the places where Aristotle uses 'what it is' as 'definition' see, for instance, *An. Pr*. I, 27, 43b7; *An. Post*. I, 22, 82b37; 83b5; II, 3, 90b4; 90b31; 13, 97a24; *Top*. I, 5, 102a32; 8, 103b13; 18, 108b22; VI, 1, 139a28, 29; *Meteor*. IV, 12, 390b17; *De An*. I, 1, 403a30; *Met*. B, 2, 996b20; Δ, 13, 1020a19; 18, 1022a27; E, 1, 1025b31; 1026a4; Z, 7, 1033a2; 10, 1035a30; H, 2, 1043a15.

[10] Some examples of such usage are *An. Post*. II, 2, 90a15, where Aristotle investigates the definition of an eclipse; in *De An*. I, 1, 402a13 and 402a23 he queries the definition of the soul. In a similar way, in *Phys*. IV, 10, 218a31 Aristotle investigates the definition of time and in *Rhet*. I, 5, 1360b7 he questions the definition and the nature of happiness by the same construction, i.e., 'what is happiness?'.

[11] For some examples of the sense of 'what it is' as a necessary attribute, see, for instance, *An. Post*. II, 13, 96a22; 96b2-36; *De An*. I, 1, 402b17-22; *Met*. Δ, 18, 1022a27.

[12] For which, see *An. Post*. I, 4, 73a34; 22, 83a21; *Top*. IV, 1, 120b21.

[13] I do not intend to investigate all the possible details of Aristotle's conception of definition, for this is clearly beyond the aims of the present text. My sole aim is to portray the senses of 'what it is' in a general way rather than determining the intriguing details of the content and problems related to the term's most basic sense, i.e., definition.

would be possible to construct an infinite number of predications between subject and a kind; rather, the individuals are always associated under a limited number of genera. Hence, there is always a stopping point, beyond which no further predication is possible. Aristotle is envisaging a closed system of species and genera; a conception whereby necessary attributes, i.e., what is predicated of another thing in 'what it is', cannot be infinite in number.[14] The actual necessary attribute of a subject in this closed system of hierarchies of kinds is the highest possible genus for that particular subject. In our example, it is 'animal' that is the highest genus for the species 'man'. The genus (animal) that is predicated of a subject (man) is the proper necessary attribute of that subject (every man is necessarily an animal). The necessary connection in definition between the genus and the subject is emphasised strongly by Aristotle, since without this any definition is hardly possible. As a result, what is predicated of a subject in 'what it is' is a necessary attribute of that subject, which in turn shows itself as the highest genus under which that subject is placed. This brief exposition shows us that something predicated in 'what it is' can be used in two ways; generally it will refer to the necessary attributes and more specifically it can be used as meaning the genus of that subject. Accordingly, it would not be wrong to conclude that, beyond referring to definition and to necessary attributes, Aristotle specifies 'what it is' as referring to genus, as genus is always predicated of an underlying subject in 'what it is'.[15]

According to the above observations, then, every predication in 'what it is' has a necessary characteristic. This is not the sole feature designating 'what it is', since Aristotle specifies this type of predication as 'universal' as well.[16] As we have seen, 'what it is' is not concerned with an unlimited number of particulars but is always directed to something that is always one and identical. The

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[14] Cf. *An. Post*. I, 22, 82b37-39; 84a13, 25.

[15] For this sense of 'what it is' see *Top*. I, 9, 103b36; 18, 108b22; IV, 2, 122b16; 6, 128a24; V, 3, 132a10-20; VI, 5, 142b27; VII, 3, 153a18; 5, 154a27; *Met*. Δ, 18, 1022a27; 28, 1024b5.

[16] Although I find it significant and helpful to explicate the relation between the 'universal' and the 'necessary' in Aristotle's philosophy, I will skip this discussion on this occasion in order to avoid extending the subject beyond the necessary limits. It is somehow obvious that every necessary predication is universal but perhaps what is not obvious is that every universal is necessary.

particular instances are so associated that they can be taken as belonging to a class that is the relevant genus of these instances. We have also seen that 'what it is' is already systematically correlated with the genus under which the particular instances are associated. This already implies the universal character of 'what it is' as well, for every genus is universally predicated of the species positioned beneath it. Although it seems that the universality of 'what it is' is a natural result of correlation to genus, the universal character of 'what it is' is emphasised by Aristotle separately in a number of places.[17] Hence, in the example, the genus 'animal' is not only the necessary attribute of all the subordinating species (e.g. 'man') but it is also universally attributed to all the instances that can be stated under itself. In this way, several species such as 'birds', 'tigers' and 'man' are classified under the genus 'animal'. 'Animal' is equally predicated of all these species and the particular instances of these species (e.g. Socrates is an animal) in a universal way. As a result, genus is predicated of *all* the subjects placed beneath itself without any exception, and this constitutes the universal aspect of 'what it is'.

All of the senses of 'what it is' enumerated so far can be grouped around the basic sense of the term, namely, definition. Since the meanings of 'what it is' enumerated so far are clustered around the notion of definition, one may reasonably tend to think that these meanings are solely related to linguistic notions, limited by grammatical usages. However, one can find passages where a metaphysical or ontological meaning of 'what it is' is involved. Indeed, Aristotle frequently makes use of this term as referring to substance.[18] He also employs the term frequently in his discussions of the categories of Being. In these discussions, the term 'what it is' often refers to the first category of Being, namely, the substance.[19] Hence, in his repeated enumerations of categories of

[17] See, for instance, *An. Post*. I, 14, 79a28; II, 3, 90b4; 4, 91a15; 13, 96b36.
[18] Cf. *An. Post*. I, 22, 83a21; II, 3, 90b30; 7, 92a35; 13, 96b5; *Met*. A, 8, 988b29; Z, 9, 1034a31.
[19] It is of interest to notice at least in general terms the difference between τὸ τί ἦν εἶναι (*quod quid erat esse*) and 'what it is' (τί ἐστιν). In the first instance, one may be tempted to argue that it is impossible to differentiate τὸ τί ἦν εἶναι from τί ἐστιν, as Aristotle himself sometimes uses these terms identically as referring to definitions (for such usages, see *An. Post*. II, 6, 92a7; 7, 92b29 *Top*. VII, 3, 153a15; *Met*. Z, 4, 1030a29, b5). If we look closely, however, we may find some differences between the two: basically, the difference is the scope of these two terms; τί ἐστιν

Being, instead of substance, he uses the term 'what it is'.[20] Thus, beyond other senses of the term, 'what it is' in this way, is used frequently as referring to substance.

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has a wider scope that involves almost all the elements of the definition. Recall, for instance, the instances of such definitions that involve matter (as in the example of the snub nose where 'matter' (i.e., nose) is involved in the definition). Now, in these examples, τί ἐστιν is generally correlated with the entire elements of definition, which means it involves the formal parts as well as the material parts of the definition. τὸ τί ἦν εἶναι, on the other hand, has a narrower scope; Aristotle mostly uses this term to refer merely to 'form' (εἶδος) (Cf. *Phys*. II, 2, 194a21; *Cael*. I, 9, 278a3; *GC* II, 9, 335b35; *De An*. II, 1, 412a20; *PA* I, 1, 642a25; *Met*. Z, 4, 1029b27; 7, 1032b2 ff.; 10, 1035b16 ff.; H, 3, 1043b1; Λ, 8, 1074a35.). This is supported in the passages where he discusses four causes; in these passages τὸ τί ἦν εἶναι is always correlated with the formal cause (Cf. *Met*. A, 3, 983a27; 7, 988a34; Δ, 2, 1013a27; b22; Z, 17, 1041a28; H, 4, 1044b1). In the wake of these passages, it is possible to arrive at a conclusion that the scope of τί ἐστιν and τὸ τί ἦν εἶναι differ in the sense that whereas τί ἐστιν is used to refer to almost everything to which a thing pertains (i.e., form as well as matter), τὸ τί ἦν εἶναι refers to the elements without which a thing cannot be itself (i.e., the formal elements that make a thing that thing). Hence, τὸ τί ἦν εἶναι more strictly signifies the particular nature (i.e., the essence in the proper sense; this is confirmed most clearly in *Met*. Δ, 18, 1022a26; cf. also *MA* 8, 708a12; *Met*. Z, 4, 1029b13; 11, 1037a33; 13, 1038b14) of a thing by solely addressing its form, whereas τί ἐστιν refers to the sum of *all* elements that may be involved in describing that thing and thus involves not only the formal elements but also the material elements. Certainly, in the case of a substance whose nature consists of pure form, τί ἐστιν and τὸ τί ἦν εἶναι overlap. In such cases it is legitimate to use these two terms interchangeably. I will reflect on this topic later when I discuss the central books of *Metaphysics*, in the next chapter.

[20] For the enumerations of categories and the use of 'what' in these enumerations, see *Met*. Δ, 7, 1017a25; 28, 1024b13; E, 2, 1026a36; Z, 1, 1028a11, 14; Θ, 1, 1045b33; I, 2, 1054a15; *EN* I, 6, 1096a20. Before I conclude this discussion of 'what it is' I must touch upon two interconnected points. First, although initially it may seem not to represent an especially happy result on Aristotle's part, he insists that there is no demonstration of these definitions (*An. Pr*. I, 31, 46a37; *An. Post*. II, 3, 90b30; 7, 92a35; *De An*. I, 1, 402b26; *GA* II, 6, 742b33; *Met*. B, 2, 997a31; K, 7, 1064a7) and they will be revealed by -pği*some other method* (τις ἄλλος τρόπος τῆς δηλώσεως), rather than demonstration (*Met*. E, 1, 102ğşi5b15) and, unfortunately, the details of the phrase 'some other method' are not given in Book E. Second, in order to prevent any possible confusion, it is significant to mention that it is possible to find some definitions that can be regarded as an exception to this rule. For instance, in *Posterior Analytics* (*An. Post*. II, 93a29) Aristotle discusses the definition of an eclipse in which the elements of definition are loosely connected, in the sense that they do not immediately reveal the cause and the justification of the connections between them. In order to reveal the proper causes and conditions of these definitions one may appeal to demonstrations. The underlying idea of the possibility of demonstrating definitions lies in the conception that, beyond its being a simple signification of a thing, Aristotle envisages definition as a causal connection disclosing the proper principles of the thing it defines. If the causal connections between the elements of a definition are not immediately plain, then the defining conditions and the causal connections can be revealed by way of a demonstration. In these cases, it is possible to have a demonstration of a definition. The general upshot of this is that it is possible to find two types of 'what it is' in the sense of definition in Aristotle's corpus. One of them is 'what it is' in the strict sense that cannot be demonstrated because the causal relation between the elements of the definition is immediate. The second type of 'what it is', which appears less frequently, is the one in which the elements of definition are loosely connected so that they require a demonstration in order to be 'made clear'. This second type really should be regarded as an exception to the first and proper sense of definition, and to the basic idea that definitions cannot be demonstrated.

This rough analysis shows that 'what it is' is used in several ways that can be listed as follows:

a. definition

b. necessary and universal attributes of a thing

c. genus

d. substance

This shows that the science of Being is primarily concerned with the definitions of things for, as it were, (b) and (c) can be regarded as a clarification of (a), simply because every definition is constructed by finding the necessary and universal relations connecting a species to a genus (I will deal with (d), namely the meaning of 'substance' and its relation with the subject of the science of Being, later in this chapter).

The declaration in *Posterior Analytics* that no science can define its proper subject means that if there is no science of definitions then they remain unstudied. This is quite an unhappy result, particularly for Aristotle's conception of science, in which the definitions are the proper principles of all sciences.[21] My aim in determining the senses of 'what it is' in the Aristotelian corpus is to discover whether Aristotle gives clues for the avoidance of such a puzzling result, and to understand Aristotle's actual intentions in attributing the study of definition to the science of Being. By virtue of this analysis, we are now to understand that the requirement of *Posterior Analytics* is fulfilled in Book E, where Aristotle explicitly states that the science of Being deals with the 'what it is' of things, given that the senses of 'what it is' have some relation with definition. The other sciences assume the 'what' of their subjects and construct loose or accurate demonstrations upon this assumption. Their scope is limited by that of the science of Being, and the boundaries between these sciences and the science of Being are described just after the definitions of things. In other words, the work of the science of Being starts exactly where the duties of the other sciences vanish, namely from the definitions of things. This can be seen as

[21] 'The principles of demonstrations are definitions': *An. Post.* II, 3, 90b24; *Met.* M, 4, 1078b24, 29.

the outline of Aristotle's conception when he attributes the study of 'what it is' to first philosophy. A deeper understanding of this conception would be possible if one adds the other aspect, namely the 'if it is', to the picture, and this is what I will now do in this section.

3.2.2. 'If it is' (εἰ ἔστιν)

To determine what Aristotle means by 'if it is' (εἰ ἔστιν) is quite straightforward compared with 'what it is'. When Aristotle uses the term 'if it is' he focuses on whether a thing exists. According to this conception, the business of the science of Being is to decide whether something is a Being or not. No science can deal with the existence of what it deals; rather, they assume this existence and inquire into that. The existence, on the other hand, is the task of a metaphysician.

3.2.3. Connections: 'what it is' and 'if it is'

Can we find a connection between these two tasks of the science of Being? It seems clear at once that it is impossible to know what something *is* without knowing if it is.[22] In order to understand this relation further, we might note that one might find a close connection between the 'why-ness' of a thing and the definition of that thing. In this conception, an inquiry into 'what it is' is simply to find the causes of a thing and, correspondingly, to inquire, for instance, why something happens is nothing other than to give an account of that thing. Aristotle's well-known example is the eclipse that can be defined as the screening of the Moon by the Earth.[23] Now, if we were to ask why an eclipse happens, the answer would be the account of the eclipse itself, that is, because the Moon is screened by the Earth. In such cases, then, 'what it is' is reduced to

[22] 'For it is impossible to know what a thing is if we are ignorant of whether it is'. *An. Post*. II, 8, 93a20. Sometimes 'if it is' and 'what it is' are known simultaneously (for which case, see *An. Post*. II, 8, 93a30-36; cf. 9, 93b22; in these cases the elements of definition and the elements of demonstration are intimately connected so that there is no need for a further middle term, i.e., a cause standing as a medium between demonstration and definition) and sometimes 'if it is' is known before 'what it is' (cf. *An. Post*. II, 8, 93a33-37).
[23] *An. Post*. II, 8, 93a30-93b7. Cf. *An. Post*. II, 1, 89b25.

the 'why'.[24] It would not take much imagination to think that it is impossible to know 'why' something happens before admitting that it happens (i.e., exists), and in most cases knowing what happens simultaneously yields the knowledge that it happens. That is to say, an inquiry aiming to find the definition, i.e., aiming to find 'what it is', comes after or simultaneously with the knowledge of 'if it is'. This amounts to saying that the inquiry concerning the 'whatness' of a thing addresses a further and deeper investigation into the nature of that thing and requires an initial knowledge of the existence or 'ifness' of that thing.[25]

Now it seems there is a closer relation between 'what it is' and 'if it is'. For consider the following: the question 'if it is' asks whether a thing exists or not. This question, however, cannot be answered without placing that thing in the hierarchy of Beings. Thus, it seems impossible to affirm or deny an existence of a thing without determining the ontological status of that thing. If we cannot place it into the hierarchy of Beings, then we can conclude that it does not exist; if, on the other hand, we can place the thing into the hierarchy of Beings then we can affirm that it exists. Hence the deep insight is that one might find oneself trying to find out the ontological status of a thing, as one previously attempted to decide whether that thing exists. After all, if one is to show that something exists, it is necessary in one way or another to place it into the hierarchy of Beings. Now, on the other hand, determining the nature of that subject in answer to the question of 'what it is' places it under the proper genus, which in turn is to place it under the hierarchies of Beings and thus to determine its ontological level. In other words, a proper definition of a thing, in this conception, requires a proper placement of that thing into the hierarchy of Being and determination of its ontological level. Therefore, determining the ontological status of a thing is assigned to both 'what it is' and 'if it is', which amounts to saying that there is a close relation between the terms 'what it is'

[24] For this reduction, see *An. Post*. II, 2, 90a15, 31; cf. *An. Post*. II, 8, 93a4; *Phys*. II, 7, 198a16.

[25] One may observe the systematic differentiation between existence and Being in the Middle Ages. Contrary to Aristotle, this conception allows one to attain some knowledge concerning the essence of a thing without attaining any knowledge about its existential status, as these two types of knowledge are attained by separate kinds of intellection. I shall, however, show that in Aristotelian philosophy the knowledge of essence and existence, or of the 'what' and 'if', are inseparable. Cf. Father Owens's influential explanations on this subject (2007, pp. 22-37).

and 'if it is' and the relation is more intimate than it seems in the first instance. We shall soon see that this intimacy is important in understanding Aristotle's assignment of the investigation of these two questions to the science of Being.

3.2.4. The science of Being as the study of 'whatness' and 'ifness' of the subjects of the other so-called special sciences

So far, the discussion has focused on the background to Aristotle's assignment of the knowledge of 'what it is' and 'if it is' to the science of Being in the opening passage of Book E.[26] In this conception, no science can study the essence and the existence of its proper subject-genus; rather, this work is assigned to the science of Being. What is not quite obvious in this conception, however, is that the science of Being studies the definitions of the things that are studied by the so-called special sciences. From the perspective of the special sciences, then, it seems problematic, at least in the first instance, that the definitions of their subject genera are studied by another, distinct science. Why, for instance, cannot a biologist study the definition of, say, life, rather than assuming or taking this knowledge from another science?

I think my discussion concerning the link between 'what it is' and 'if it is' may provide an answer to this peculiar character of Aristotelian science. We may start with the less problematic part concerning the existence of things. According to Aristotle, the so-called special sciences do not deal with the existence of their proper subject matters; rather, this work is assigned to the science of Being. Now this does not seem to be the reason underlying the problem that I am now addressing; rather, the problem emerges if we want to introduce the other part, namely 'what it is', into the picture. As I have mentioned, the peculiar point in this conception is that the so-called special sciences cannot deal with the definitions of their proper subjects, since this is the work of a metaphysician. A probable explanation of this seemingly

[26] *Met*. E, 1, 1025b2-17. This corresponds to [C] and [D] in my classification of this passage in section 3.2.

puzzling structure comes from the nature of the intimacy between 'what it is' and 'if it is'. My previous discussion shows that a necessary connection between 'what it is' and 'if it is' exists, in which part of knowing the essence of a thing is related to determining the ontological status of that thing, which, in turn, is an issue, without which the question 'if it is' cannot be answered. It is these intersections between what Aristotle understands from 'what it is' and 'if it is' that make it impossible in Aristotle's philosophy to know the definition of something without knowing the existence of that thing.[27]

3.2.5. 'What it is' and 'if it is' as belonging to the same type of intellection

Now, it would not take much imagination to see that the impossibility of differentiating 'what it is' and 'if it is' is what actually underlies Aristotle's utterance that the knowledge of these two types of questions belongs to the same intellection (τῆς αὐτῆς εἶναι διανοίας).[28] My discussion on the several senses of 'what it is' and 'if it is' confirms this position, since these terms, as I have argued, are necessarily linked to each other in the sense that no science can study one of them by excluding the other. The phrase 'same type of intellection' confirms that the study of essence and existence should be assigned to the same science.[29] As a result, Aristotle's utterances confirm that

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[27] As I have mentioned, this is not necessarily the case in medieval philosophy. See note 26.

[28] This corresponds to [E] in my classification of this text on section 3.2. I do not see a justifiable reason for accepting Ross's view (1924, I, 352) that favours a 'methodological' understanding of the passage confirming that the same type of intellection means 'immediate apprehension, not demonstration'. Such an interpretation would be attractive if Aristotle were to use this utterance before affirming that 'what it is' and 'if it is' are involved in the scope of the science of Being (that is, before 1025b15). For there, he indeed engages in a rather methodological discussion (note that he says, 'There is no demonstration of substance or of the essence, but some other way of revealing it'). The actual place of the utterance 'same type of intellection' shows, however, that Aristotle's aim is not methodological; it rather concerns the subject matter of the science of Being. This is confirmed by Aristotle's main concern in this part of the text to circumscribe the actual scope of the science of Being rather than to engage in a methodological discussion. Hence, in my view, the utterance 'same type of intellection' amounts to saying that the science of Being deals both with 'what it is' and 'if it is'.

[29] From Aristotle's presentation of these terms as separate questions in the *Analytics*, one might be tempted to derive that there may be a discord between Aristotle's approach in *Analytics* and in *Metaphysics*. My analysis, however, shows the inseparability of 'what it is' and 'if it is' on the basis of the whole Aristotelian corpus. In the interpretation I suggest, then, Aristotle's differentiation of 'what it is' and 'if it is' in the *Analytics* does not cover the whole analysis performed with respect to these terms. It cannot cover all the aspects of this topic either, for

metaphysics deals with 'what it is' and 'if it is', that is, with essence and existence, emphasising the fact that it is impossible to differentiate these two analyses.

3.2.6. CDH of Book Γ and Two Tasks of Book E: 'what it is' and 'if it is'

While discussing Book Γ, we have seen that Aristotle sets out certain criteria for the construction of CDH upon which the science of Being is established. Fundamentally, we have detected three criteria paving the way for a possible construction of such ordered homonyms. Recall that two of these criteria require that the core item in such homonyms should be both ontologically and logically prior to the peripheral terms. The general conception of ontological dependence means that the existence of the peripheral items in a CDH should depend on the existence of the core item. Logical priority, on the other hand, requires that the definitions of peripheral terms should be constructed by reference to the core item.

Now, I believe, one might find a certain parallelism between the structure that we encounter in Book Γ and Aristotle's assignment of 'what it is' and 'if it is' to the science of Being. The science of Being will study the essences of things that *are*. But how in fact would such a study be possible? We attain definitions of things by way of relating these things to genera under which they are situated. The definitions of the highest genera, namely the categories of Being,[30] however, can only be attained through the structure provided by the CDH of Being. Hence, what we need are the definitions of the highest genera through which other things are defined. At this point we need a doctrine that constructs

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such an analysis would require a full doctrine of substance as developed in *Metaphysics*. In any case, I do not think that there is a contradiction between *Analytics* and *Metaphysics* with respect to 'what it is' and 'if it is' for, in my view, none of the passages in *Analytics* declares the impossibility of a joint inquiry into these terms nor does *Metaphysics* reject the possibility of conceptual differentiation of these questions. It is worth noting that many scholars have rejected the existence of such controversy as well. Bonitz, for instance, finds no obstacle in reconciling the approach of *Analytics* with that of *Metaphysics* (1870, II, 281) and Ross agrees (1924, I, 352) that there is no contradiction between the two texts.

[30] Cf. *An. Post*. I, 22, 83b16; *Top*. I, 9, 103b20; *De An*. I, 1, 402a22.

the underlying structure for how the highest genera can be defined, since regular definitions that are established upon the *kata hen* structure of genera and species cannot be constructed in the case of the highest genera simply because there are no higher genera with which they can be linked and thereby defined.[31] Book E's requirements with respect to essences of things should therefore be supported by an initial doctrine that sufficiently explains how we obtain the definitions of highest genera, since without them it is impossible to construct any definition at all. It is exactly at this point that Book Γ supplies the doctrine needed to construct proper definitions of the highest genera by introducing the notion of logical dependence. Hence, the essences of Beings can only be attained, according to the scheme provided by Book Γ, through their necessary references to the core. The possibility of their definition lies in the fact that these highest genera are all necessarily connected to a core item, on which they are logically dependent. Were there no underlying structure for one to attain the definitions of the highest genera, that is, if we were not to have logical dependence, Aristotle's assignment of 'what it is' to the science of Being could not be justified. This task, in other words, can only be fulfilled by way of logical dependency relations between the different manifestations of Being, that is, between the so-called secondary categories and substance. This provides the underlying structure by way of which the definitions of highest genera can be attained, which in turn, paves the way for constructing definitions of the species situated beneath these highest genera. Hence, Book Γ establishes the grounds for Book E's assignment of 'what it is' to the science of Being.

Furthermore, we have seen that in order to attain 'what it is' one should place things under the hierarchy of kinds. As I have mentioned, one needs to do this if one is to answer the 'if it is' question as well. Hence, the existence of things, namely that placing things under the hierarchies of kinds by which one determines their ontological statuses, is also assigned to the science of Being.

[31] The term 'Being' in Aristotle is a mere name, 'said in many ways' (Cf. *Phys.* I, 2, 185a21; *De An.* I, 5, 410a13; *Met.* Γ, 2, 1003b5; Δ, 1017a22-27; E, 2, 1026a33-b2; Z, 1030a21; *EN* I, 6, 1096a24) and is not a genus (*An. Post.* II, 7, 92b14; *Top.* 5, 6, 127a26ff; 7, 144a31-b1; *Soph. El.* 11, 172a14; *Met.* B, 3, 998b22; H, 6, 1045b5; K, 1, 1059b31; *EN* I, 6, 1096a23; *EE* I, 8, 1217b35).

This, I believe, also finds its grounding structure in Book Γ as well for how, in reality, we are to determine the ontological statuses of things. Obviously, without referring to the Being *par excellence*, this would not be possible. Being, in other words, should first be observed in that which sufficiently fulfils the fullest sense of the term, that is, in that which most deserves to be called Being. The underlying structure for such a conception is established in Book Γ, where Aristotle implies the ontological dependency relations between the several Beings. This amounts to saying that we can only determine the 'ifness' of a certain Being by way of referring to the core item, which is ontologically prior. The ontological priority, in other words, paves the way for a scientific analysis of the ontological statuses of things that *are*, which in turn, is assigned to the science of Being in Book E. Obviously, one might have some knowledge of the ontological statuses of things; however, this knowledge would be akin to 'opinion' rather than 'truth' were there no means by way of which we scientifically determine the statuses of things that *are*. In other words, if we did not have some knowledge with respect to the ontological dependencies between things that *are* in the way Book Γ has proposed, we would not be able to determine the ontological statuses of these things properly.

Hence, there seems to be a certain parallelism between Book E's assignment of 'what it is' and 'if it is' to the science of Being with the conception of Being that we encounter in Book Γ. This parallelism, however, can only be brought to the fore if we read Book Γ and the structure it establishes, namely, the CDH of Being, in the way I suggest, that is, in the way that motivates us to find ontological and logical dependency relations in instances of the CDH of Being.

3.3. Division of Sciences

In the first section of Book E, one witnesses the division of sciences. One immediately notices that this division is established on the doctrine of Book Γ, where Aristotle established the grounds for separate sciences investigating several parts of Being. The conception developed in Book Γ is established

against the Platonic background, which favours a single gigantic science of Being leaving no room for the separate special sciences.[32] Furthermore, it has been proved that although Being is not a genus, it can still be investigated by a separate science by virtue of ordered relations found in certain homonyms, namely, through CDH, without dissolving the other so-called special sciences in its vast comprehensiveness. Book Γ, therefore, establishes the necessary doctrinal background for Book E, without which it would be impossible to justify the differentiation of sciences in the way that Aristotle presents, since, if the puzzles concerning the scope of the science of Being were not to be averted, there would be no obstacle to thinking either that the science of Being investigates all parts of Being, leaving no room for the other so-called special sciences or – given that Being is not a genus – that the science of Being cannot unify its subject matter in such a way as to open up the possibility of a single investigation. These puzzles, then, are fully averted in Book Γ in order to pave the way for a further determination of the scope of the science of Being. The developments of Book Γ, therefore, are necessary but not sufficient, since although they establish the grounds for the possibility of a separate investigation of Being they do not describe the precise scope of the science that should be determined, now, in the light of the doctrine that resolves the puzzles surrounding the scope of the science of Being. On the basis of this doctrine, in Book E Aristotle presents the division of sciences and attempts to determine the scope of the sciences with a special emphasis on what he calls 'theoretical sciences'.

[32] See *Republic* VI, 510b-511d. In *Epinomis*, after presenting a kind of division of sciences (975b5-976e2) Plato, however, states that none of them deserves to be called 'Wisdom' [σοφία] (976c4-6). After that, he investigates the science that should be regarded as the highest and finds that arithmetic, without which all the other sciences would be eliminated (977e1-2: πάντα δ' ἀπολείπεται ὸ παράπαν, ὅταν ἀριθμητικήν τις ἀνέλῃ) is the most necessary science for attaining Wisdom. Again, in *Philebus* (55e1), Plato affirms that 'if someone were to take away [χωρίζῃ] all counting [ἀριθμητικὴν], measuring [μετρητικὴν], and weighing [στατικήν] from the arts and crafts, the rest might be said to be worthless [φαῦλον]' (this is followed by another division of sciences (56a2ff.)).

Aristotle's presentation of the division of sciences has two levels.[33] In the first level, he generally divides all knowledge into three parts; practical (ἐπιστήμη πρακτική), poetical (ἐπιστήμη ποιητική), and theoretical (ἐπιστήμη θεορητική). This grouping is made according to the principles and aims that these kinds of sciences have.[34] Whereas the practical sciences have their origins in the moral agent,[35] focusing on the action of the agent,[36] the starting-point of the poetical sciences is in the artist,[37] who produces an external product.[38] The theoretical sciences aim to know; they neither aim to produce – as in the case of poetical sciences –, nor do they aim at an action – as in the case of practical sciences. Instead, such sciences have their origins in the things that they aim to grasp. The self-reflective character of theoretical sciences puts them in the highest degree among other types of sciences, a theme that can be encountered in several places in Aristotle's corpus,[39] and is also confirmed in Book A, where

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[33] *Met*. E, 1, 1025b19 ff. For the other places where Aristotle presents the division of sciences, see *Top*. VI, 6, 145a15; VIII, 1, 157a10; *Met*. K, 7, 1064a10; *EN* VI, 2, 1139a27.

[34] See *EN* I, 1, 1094a1.

[35] *Met*. E, 1, 1025b23.

[36] Practical sciences' aim is the action itself (See *EN* VI, 5, 1140b6). Aristotle contrasts such sciences with theoretical sciences in *De An*. III, 10, 433a14; *Met*. α, 1, 993b20; *EN* VI, 2, 1139a27. One may hesitate to regard practical knowledge as 'science'; instead, it may be identified simply with the virtue 'φρόνησις'. Indeed, contrary to Plato (see *Protagoras*, 357b4ff.), in many of the passages Aristotle hesitates to regard 'φρόνησις' as science, i.e. ἐπιστήμη, since, strictly speaking, the proper aim of a science should be the universal knowledge of things, whereas φρόνησις deals with matters of action: *EN* VI, 5, 1140b2; 7, 1141b16; VII, 10, 1152a8; *MM* I, 34, 1197a1; 32; *EE* VII, 13, 1246b34. Though these passages confirm that Aristotle hesitates to regard practical disciplines that are identified by φρόνησις as a 'science', in some of the passages he still regards practical disciplines as sciences; see, for instance, *SS* 1, 437a3; cf. *Pol*. IV, 1, 1288b22; φρόνησις is the natural virtue and excellence of the rational faculty (*Top*. V, 6, 136b11; *EN* VI, 5, 1140b20; 12, 1144a1; 13, 1144b28; *MM* II, 34, 1198a32-b8; *VV* 1, 1249b26; 2, 1250a3; *Rhet*. I, 9, 1366b20) that can be regarded as the practical wisdom which desires the ultimate good (*Rhet*. I, 7, 1363b14; cf. *EN* VI, 8, 1141b30) and which decides how to act in particular cases (*EN* VI, 5, 1140b20; 7, 1141b14; 10, 1143a8; (cf. 1145a5) *MM* II, 3, 1199a20-b10; *Rhet*. I, 7, 1364b18) by way of deliberation (*EN* VI, 9, 1142b23-35; *VV* 4, 1250a30-39) as a result of which one attains happiness (*VV* 2, 1250a3).

[37] *Met*. E, 1, 1025b21. Rather than calling these disciplines ἐπιστήμη Aristotle prefers to call them 'τέχνη' just like Plato, who doubts such disciplines are ἐπιστήμη. In *Republic* (VII, 533d6), he states that we call such disciplines 'sciences' by 'force of habit' (προσείπομεν διὰ τὸ ἔθος), and he also adds that these disciplines are 'clearer than opinion, darker than knowledge [ἐναργεστέρου μὲν ἢ δόξης, ἀμυδροτέρου δὲ ἢ ἐπιστήμης]'.

[38] See *EN* VI, 4, 1140a9; where art is defined as 'a state of capacity to make'. Correspondingly, the aim of such sciences lies in the production of an external product. Hence, these sciences can be contrasted with both practical sciences whose aim is to act (see *EN* VI, 4, 1140a6; *MM* I, 34, 1197a12 cf. *EN* I, 7, 1097a16; VI, 5, 1140b22) and theoretical sciences whose aim is to know (see *Cael*. III, 7, 306a16; cf. *Met*. Θ, 2, 1046b2; Λ, 9, 1075a1).

[39] According to Aristotle it is a merit of any kind of knowledge to have reflexive character, which is associated with excellence (ἀρετή) and self-sufficiency (αὐτάρκεια) (*EN* X, 7, 1177a27).

Aristotle discusses the characteristics of Wisdom.[40] In terms of the aims of this thesis, however, the second level in the division of sciences is more important, since in this level Aristotle presents a threefold division of theoretical sciences into physics, mathematics and theology. Let us turn to the passage where Aristotle presents this division:

> But if there is something which is eternal [ἀΐδιον] and immovable [ἀκίνητον] and separate [χωριστόν], clearly the knowledge of it belongs to a theoretical science [θεωπητικῆς] – not, however, to natural science [φυσικῆς] (for natural science deals with certain movable things [κινητῶν]) nor to mathematics, but to a science prior [προτέρας] to both. For natural science deals with things which are inseparable from matter [ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ][41] but not immovable [οὐκ ἀκίνητα], and some parts of mathematics deal with things which are immovable [ἀκίνητα], but probably not separate [οὐ χωριστὰ], but embodied in matter; while the first science [πρώτη] deals with things which are both separate [χωριστὰ] and immovable [ἀκίνητα].[42]

Two significant points should be noted in this passage. First, the criteria used in the first level of Aristotle's division of sciences into practical, poetical and theoretical sciences (i.e., the proper principles to which these sciences depend) are no longer used in the division of sciences in the second level, namely in the division of theoretical sciences: instead, two criteria have recently been introduced; the criterion of separation (χωριστά) and the criterion of immovability (ἀκίνητα). The theoretical sciences are divided into three major sciences based on these two criteria rather than the principles on which they depend. Second, there is a certain hierarchy between the aforementioned sciences and the first philosophy, that is, the science of Being is prior to both mathematics and physics. I will now turn to two criteria upon which the theoretical sciences are divided.

3.3.1. First criterion: χωριστός

The reflexive character of these sciences is contrasted with practical sciences that are directed at action: *EN* I, 3, 1095a5; cf. *Met*. A, 2, 981a30; *EN* X, 9, 1179a35.

[40] *Met*. A, 2, 982a14.

[41] The translation would be more accurate if Ross had rendered this phrase as 'but physics deals with things which are separate…'

[42] *Met*. E, 1, 1026a10-16. I have slightly modified the translation and rendered 'χωριστόν' as 'separate' rather than 'separable' as Ross suggested for certain reasons that will be cited soon in this chapter.

According to a recent study, the term χωριστός originated in Aristotle and cannot be encountered in any of the Greek authors before him.[43] On philological grounds it is possible to render the term in two ways; it can either be taken as expressing a settled state, in which case it should be translated as 'separate', or it can be rendered modally as 'separable'.[44] Since χωριστός establishes one of the criteria employed to divide theoretical sciences, one must determine which of these two renderings reflects what Aristotle intends to address in the text. This is significant not only for an understanding of what Aristotle means when he states, for instance, that 'first science deals with things that are 'χωριστά' but also for some important doctrinal reasons that we shall see shortly. If we take this term modally as 'separable',[45] I believe it may pave the way for a possible non-theological reading of the text; for in such a case, the utterance affirming that first philosophy deals with things that are 'χωριστά' may be interpreted ontologically so as to mean that this science deals with the 'separable' parts of all things.[46] In fact, such a rendering will pave the way for an interpretation that favours an illegitimate inclusiveness for, as I will show shortly, 'χωριστά' in Book E can denote the things that are separate 'in fact' but not 'in thought'. If 'χωριστά' is understood as 'separable' than it can denote the things that are separate 'in thought', which will undermine Aristotle's fundamental aim in Book E, which is to differentiate theoretical sciences. On the other hand, if we choose to render the term as 'separate',[47] this may offer a particular way of interpretation that may establish the grounds for a theological reading of the text by virtue of affirming that first philosophy deals with 'separate Being', which can ultimately be reflected in the nature of God, i.e., the Immobile Substance (IS).

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[43] See Donald Morrison (1985), pp. 91-92, who has made a computer survey of this term in several Greek authors and cannot find any occurrences before Aristotle.
[44] See Donald Morrison (1985), pp. 89-91.
[45] This rendering of χωριστός is supported by John Cleary (1994, p. 38).
[46] I will not address here what is meant by 'separable parts of all things' even though it may seem, as it stands, to be quite obscure. Without determining what these parts may be, which would certainly take us far off the track, I admit that such parts may exist and that an ontological study of Being executes a universal study of these parts. My sole aim in this part of the text is to determine which of the two meanings of χωριστός is meant in Book E without exceeding the natural limits of the actual topic of the present discussion addressing Aristotle's division of sciences.
[47] This rendering is supported by Joseph Owens (1951, pp. 383-385) and Morrison (1985).

I will now attempt to determine what exact rendering should be given to the term χωριστός in the context of Book E, by virtue of which I expect to reveal the actual scope of the science of Being envisaged in this part of *Metaphysics*. Against the arguments that the term should be taken modally as 'separable', I will argue on philosophical grounds that the other rendering, which paves the way for a possible theological reading of the text, is correct, and will attempt to confirm my findings by means of the general conception of the science of Being pictured in Book E.[48]

I believe a passage from *De Anima* may establish the grounds for what I intend to support with respect to the term χωριστός:

> The natural philosopher's [ὁ φυσικὸς] concern is with all the functions and affections of a given body, i.e., of matter in a given state; any attribute not of this kind is the business of another; in some subjects it is the business of the expert, the carpenter, it may be, or the physician; but inseparate in so far as they are not affections of the body in such a state [τῶν δὲ μὴ χωριστῶν μέν, ᾗ δὲ μὴ τοιούτου σώματος πάθη], that is, in the abstract [ἐξ ἀφαιρέσεως], are the province of the mathematician, and in so far as they are separate [ᾗ δὲ κεχωρισμένα] are the sphere of the First Philosopher [ὁ πρῶτος φιλόσοφος].[49]

I think that this passage allows for a certain interpretation that reveals the correct usage of χωριστός in Book E. According to this passage, there can be two aspects of χωριστός. First, things can be χωριστά 'in fact', meaning that they have 'separate' ontological status allowing them to exist on their own behalf without any necessity for a subordinating substance for them to occur; or they can be χωριστά 'in thought', meaning that they are 'separable' through some effort of mind from the bodies in which they exist and do not have any separate existence.[50] The former usage corresponds to the application of

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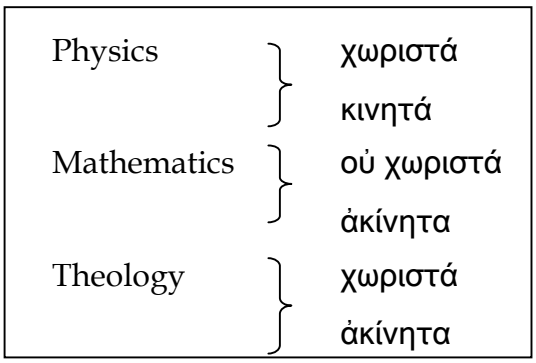
[48] In this section, my aim is not to determine and fix the meaning of χωριστός in one of the two possible renderings in *all* of its occurrences in Aristotle's corpus. My aim is rather to determine whether the term should be rendered as 'separate' or 'separable' when it occurs in the text of Book E.

[49] *De An*. I, 1, 403b11-16. I have used Hett's (*Loeb*) translation with slight modifications for this passage.

[50] This implies, as suggested in my argument, that I do not accept a single way of rendering χωριστός; although it should be rendered as 'separate' in Book E, it should be rendered as 'separable' in the passage that I will be citing soon from *Physics*. The 'κεχωρισμένα' used in the passage from *De Anima* (403b15-16) referring to the objects of first philosophy is a participle

χωριστός as referring to a certain state whereas the latter corresponds to the modal usage of the term. Now, in my view, the above passage acknowledges and implicitly articulates these two renderings of the term χωριστός. The passage informs us that the objects of mathematics are not separate 'in fact' though they are separable 'in thought' through abstraction, whereas the object of first philosophy is separate 'in fact'. The objects of mathematics, accordingly, are not separate but they are separable through abstraction.

Now, according to the division of sciences presented in Book E, physics deals with things that are 'χωριστά' but movable (κινητά), whereas mathematics deals with things that are 'οὐ χωριστά' but immovable (ἀκίνητα). The science of Being, like physics, deals with things that are 'χωριστά' but contrary to physics, whose subject matter consists of movable things, the science of Being deals with things that are immovable (ἀκίνητα). The scheme below shows Aristotle's division of theoretical sciences according to his declarations in Book E:



What will be the possible outcomes if we accept the modal rendering in Book E, namely that χωριστός refers to modal 'separable'?

(perfect passive participle) expressing a certain state that these objects obtain and should accordingly be rendered as 'separate', whereas 'τῶν δὲ μὴ χωριστῶν', (403b14), which refers to the object of mathematics, expresses a possibility and therefore should be rendered as 'separable' as translated in the text.

The above scheme tells us that mathematics deals with things that are not χωριστά.[51] Now, according to Aristotle's investigation of the ontological status of the objects of mathematics upon which he establishes his discussion of the science of mathematics, the subject matter of mathematical sciences consists of things that exist in a given material body.[52] The mathematical objects, therefore, do not have any ontological status beyond the physical natures in which they occur. Now, if we were to render χωριστός modally as 'separable' in the passage of Book E, this would amount to saying that the objects of mathematics are not separable 'in thought' as well for in such a case the modal 'separable' will include the sense in which 'χωριστά' may both mean separate 'in fact' and separate 'in thought'. This, however, will not do as it would immediately contradict what has been said in the above passage and in many places of the Aristotelian corpus to the effect that mathematics deals with the objects that are solely separable 'in thought' through abstraction. Correspondingly, the term χωριστός in Book E, where Aristotle confirms that mathematics deals with things οὐ χωριστά, should explain the actual state that a thing 'in fact' has and should be rendered as 'separate'.

Furthermore, if the modal rendering of the term χωριστός were to be accepted in Book E, this would amount to saying that the science of Being deals with things that are 'separable'. According to the above passage, however, the objects of the science of Being are already separate 'in fact'. Since these objects

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[51] This is confirmed in many places in Aristotle's corpus. In addition to the cited passage from Book E, see *De An*. I, 1, 403b15; III, 7, 431b15; *Met*. B, 2, 997b20; K, 1, 1059b12; 7, 1064a32; M, 2, 1077a9; N 3, 1090a29.

[52] Space limitations mean I cannot now go into details of Aristotle's discussion of mathematical objects. In his examination of mathematical objects Aristotle aims to resolve an *aporia* stated in Book B asking 'whether numbers [ἀριθμοὶ] and lines [μήκη] and figures [σχήματα] and points [στιγμαὶ] are a kind of substance or not, and if they are substances whether they are separate [κεχωρισμέναι] from sensible things [τῶν αἰσθητῶν] or present [ἐνυπάρχουσαι] in them' (*Met*. B, 1, 996a13-15). He has inquired into the proper object of the science of mathematics by resolving this *aporia* in three stages; first, he makes a series of analyses concerning the peculiar nature of mathematical objects (*Met*. M, 2, 1076a38-1076b11); later, he presents an examination of the ontological statuses of these objects (*Met*. M, 2, 1076b11 ff.); finally, he investigates the mode of Being of mathematical objects (*Met*. M, 3). As a result of these analyses, he states that the object of mathematics does not mean separate existence: 'they [mathematical objects] cannot in any way exist separately [οὔτε κεχωρισμένα που εἶναι δυνατόν].' (*Met*. M, 2, 1077b13-14) (note that the verb 'κεχωρισμένα' used in the passage (perfect passive) is the verb 'χωρίζω', which is the same verb that is used in the *aporia* of Book B (996a15)).

are 'in fact' separate, the mind has no obligation to engage in an effort of abstraction to separate them. That is why nowhere in the Aristotelian corpus can we find such an effort of abstraction that is to be employed by the metaphysician, though, as we have seen, he constantly affirms that mathematicians should engage in such an activity to 'separate' the object of inquiry.[53] These remarks show that in the passage of Book E, χωριστός should not be rendered modally as this would cause inconsistencies with what has been stated in the Aristotelian corpus; rather, it should be rendered as 'separate', addressing the actual state of a thing, that is, separate 'in fact' only.

A passage from *Physics* may be employed for a further support, where Aristotle states:

> Now the mathematician, though he too treats of these things, nevertheless does not treat of them as the limits of a natural body [οὐχ ᾗ φυσικοῦ σώματος πέρας ἕκαστον]; nor does he consider the attributes [συμβεβηκότα] indicated as the attributes of such bodies. That is why he separates them [διὸ καὶ χωρίζει]; for in thought [τῇ νοήσει] they are χωριστὰ from motion, and it makes no difference, nor does any falsity result, if they are separated [χωριζόντων].[54]

The mathematician who deals with these natures, however, does not consider their physical natures qua their physical properties except from the perspective of magnitude, that is, qua quantity, disregarding the intrinsic condition of that in which they occur.[55] Now, as we have seen, the possibility of such an investigation lies in the special type of action in which a mathematician engages when s/he inquires into mathematical objects, which Aristotle calls 'abstraction'. By means of abstraction, the mathematician deals with things that

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[53] The mathematician deals with things that are abstracted (ἐξ ἀφαιρέσεως) from the substance in which these objects occur. Aristotle uses 'abstraction' as a technical term reserved solely for the science of mathematics. The mathematician strips off all the sensible qualities, leaving only the quantity, and considers this qua quantity (*Met*. K, 3, 1061a29; cf. *Met*. Z, 3, 1029a16). The term 'abstraction' can be contrasted with 'addition' (some of the passages where one can witness such a contrast are, for instance, *An. Post*. II, 5, 91b27; *Phys*. I, 7, 190b7; III, 6, 206a15; VIII, 10, 266b3; *Met*. B, 4, 1001b7; *EN* II, 6, 1106b10; V, 4, 1132a33-b7; 11, 1138a18) and thus be correlated with 'subtraction'. Accordingly, when a mathematician 'subtracts', s/he subtracts the qualities that are not involved in the investigation, leaving only quantity for investigation. Physics, on the other hand, deals with concrete objects (*Cael*. III, 1, 299a16) for which reason, as Aristotle explicitly affirms, there is no place for abstraction in this science (*PA* I, 1, 641b11).

[54] *Phys*. II, 2, 193b31-35.

[55] Cf. *Met*. Z, 10, 1036a9; *Phys*. II, 2, 194a10-12.

do not have any separate existence from the bodies in which they occur. The mathematician abstracts, i.e., *separates*, the proper objects of his/her investigation from the material nature and considers them separately.

The mathematical objects, therefore, are mere abstractions[56] that are separable 'in thought' whereas they do not have separate existence beyond the material body in which they exist. In other words, the proper objects of the mathematician are not *separate* (i.e., from matter) whereas they are *separable* through abstraction.[57]

Now, if we were to accept the modal rendering in Aristotle's division of theoretical sciences in Book E, this would produce adverse results, for such rendering, as we have seen, is not sensitive to the two aspects of χωριστός. Hence, such a rendering would impede Aristotle's actual intentions in the passage, which is to differentiate the theoretical sciences, for in such a case it would be impossible to differentiate first philosophy from mathematics. If such a rendering were to be accepted, both mathematics and first philosophy would deal with things that are 'separable'. We are informed in the passage of Book E that mathematics and the science of Being deal with immovable things. However, whereas the former deals with objects that are 'οὐ χωριστά', the latter deals with things that are 'χωριστά'. We have seen that though the objects of mathematics are not separate 'in fact', they are separable 'in thought' through abstraction. If we rendered χωριστός as 'separable' then, since Aristotle states that first philosophy deals with χωριστά and since both of these sciences deal with immovable things, both mathematics and the science of Being would be dealing with things that are 'separable', in which case there would be no way to differentiate these two sciences from each other. This result would certainly contradict Aristotle's aim in this passage, which is to differentiate the theoretical sciences.[58]

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[56] See *Cael*. III, 1, 299a16; *De An*. I, 1, 403b15; *Met*. K, 3, 1061a29; *EN* VI, 8, 1142a18.
[57] See *De An*. III, 7, 431b14.
[58] This implies that Ross's translation should be modified accordingly, that is, 'χωριστά' should not be rendered as 'separable' but as 'separate'.

Having determined the correct rendering of the term χωριστός, we can now turn to the function it plays in the division of theoretical sciences. Accordingly, one may ask whether this term is capable of differentiating mathematics from physics. This question should certainly be answered in the positive, because although mathematics deals with the things that are not separate, physics deals with things that are separate. The primary focus of the science of physics is a primary category of substances that obtain separate existence. In many places, Aristotle confirms that physics deals with sensible substances[59] in so far as they are movable, and mathematics, on the contrary, deals with quantity, which is a secondary category, ultimately conditioned to substance for its existence, and therefore cannot be regarded as having a separate existence. The criterion is thus capable of differentiating mathematics from physics.

That the same criterion, i.e., χωριστός, is also capable of differentiating mathematics from the science of Being is clear, however, only if we accept the correct rendering of the term χωριστός. If χωριστός is to be rendered as 'separate' rather than 'separable', it is capable of differentiating the science of Being from mathematics, since, as I have mentioned, mathematics deals with quantity, which has no separate existence beyond the substratum from which it is reflected, whereas theology deals with substance that is ultimately separate. On the other hand, physics and the science of Being cannot be differentiated on the basis of the term χωριστός, since they both deal with separate things. These two sciences can only be differentiated from each other by way of Aristotle's second tool, which considers things in terms of whether they are movable or immovable. The criterion of χωριστός, therefore, is not sufficient to establish the ultimate distinctions between the three theoretical sciences. In order to explore Aristotle's division of theoretical sciences further, I will now move to the

[59] See, for instance, *Met*. α, 995a18; Z, 11, 1037a14; K, 7, 1064a17-b5; Λ, 1, 1069a36. Because physics deals with such material natures, it is the responsibility of natural scientists to study even the parts of the soul that are not independent of matter (*De An*. I, 1, 403a28 (cf. 413b25); *PA* I, 1, 641a21; 29; *Met*. E, 1, 1026a5).

second criterion, analysis of which will help us to understand Aristotle's actual intentions in putting forward the criterion χωριστός.

3.3.2. Second Criterion: The science of Being as the Science of the Immovable

In order to differentiate mathematics, physics, and the science of Being, we need more than the criterion of χωριστός, for, as we have seen, although it is capable of differentiating mathematics from the other two theoretical sciences, it is, as it stands, incapable of differentiating physics from the science of Being. Consequently, in the passage from Book E, Aristotle introduces another criterion, which addresses whether the object of a science is movable or immovable. According to this second criterion, mathematics and the science of Being deal with things that are immovable whereas physics deals with movable things.[60]

According to a passage from *Physics*, the term 'immovable' can be applied to three types of things.[61] First, it can be applied to things that are absolutely incapable of being moved; second, it can be applied to things that can hardly be moved; and finally, it can be applied to things at rest for some external reasons[62] but naturally designed for and capable of motion. Of the three applications, only the first type can strictly be called 'immovable', as these types of objects are absolutely incapable of being moved; the other two types of things, however, cannot be called 'immovable' in the absolute sense, since they can actually be moved but not are moving at the moment for some reason. The passage in Book E therefore addresses the first type.

What is the thing or things that are absolutely immovable and separate? This we can answer on the basis of Aristotle's conception of the Universe. According to this conception anything that moves is moved by another thing, but the

[60] That physics, or the science of nature, deals with movable things is confirmed in much of the Aristotelian corpus. See, for instance, *Phys*. II, 7, 198a28; *Cael*. IV, 1, 308a1; *Met*. K, 1, 1059b16; 3, 1061b6; b29; 7, 1064a31; Λ, 1, 1069a36.
[61] *Phys*. V, 2, 226b10.
[62] See *Phys*. VIII, 2, 253a11-21; 6, 259b1-16.

series cannot go on infinitely and there must be a first mover, which itself is unmoved.[63] This Unmoved Mover can be regarded as the ultimate mover in the Universe.[64] The movement originated by the unmoved mover, which Aristotle explicitly calls God,[65] propagates through the subordinating things. The passage from Book Λ, where Aristotle differentiates three types of substances, may be of help in determining what is actually meant by the thing that is immovable. As we have seen in the previous chapter, Aristotle enumerates three types of substances;[66] of these three types of substances, two of them, namely NSS and ESS, are dealt with by natural scientists since they engage in movement.[67] However, the last type, i.e. IS, is dealt with by metaphysician. Hence, when Aristotle states that the science of Being deals with the immovable, we have good reasons to think that he is referring to IS.

It has been stated that mathematics deals with things that are immovable as well. However, as we have seen, Immovable Substance is already said to be dealt with by a metaphysician. Since this substance is, as we are informed, to be investigated by a metaphysician, how are we to interpret Aristotle's affirmation that mathematics deals with immovable things as well? What kinds of things, then, are addressed by 'the immovable objects' that are said to be dealt with by the mathematician? The objects of mathematics, as stated in several places, are indeed immovable.[68]

One can appeal to the other criterion, namely the separation, in order to differentiate the objects of mathematics and the science of Being. Both the metaphysician and the mathematician deal with immovable things but, as I have argued, the latter deals with objects that do not have separate existence beyond the things in which they occur. Numbers, lines and other mathematical objects can thus be regarded as certain attributes of substances, separable 'in

[63] See *Phys*. VIII, 5; 6, 260a11-20; *Met*. Γ, 5, 1010a34; 8, 1012b29.
[64] I will omit to discuss here how the unmoved mover can originate a movement and will deal with this topic, when I discuss Book Λ.
[65] *EE* II, 6, 1222b23.
[66] *Met*. Λ, 1, 1069a30ff.
[67] Cf. *Republic* 529b7, where Plato rejects the possibility of any knowledge concerning sensibles.
[68] See *Phys*. II, 7, 198a17; *Cael.* III, 6, 305a25; *MA* 1, 698a26; cf. *Phys*. II, 2, 194a4.

thought' solely through abstraction. These abstract objects of mathematics are indeed immovable but they do not have any place in the order of the Universe that is established upon the hierarchies of substances.[69] Hence, the fact that a metaphysician is tasked by the study of Immovable Substance does not prevent him stating that mathematics deals with immovable things as well because such objects of mathematics are not substances but abstractions of mind that cannot exist apart from the actual substances in which they occur.

What, in fact, is meant by the things that are separate and that are supposed to be dealt by the metaphysician? Now, one might think that these should be substances on the basis of the fact that the other so-called secondary categories are dependent upon substances for their existence,[70] as my argument has shown in the previous chapter while I was discussing Book Γ. Indeed, it seems obvious upon reflection that if there are substances, then there must *be* other categories as well. If, then, Callias exists, he must have such and such qualities (e.g. some colour or other), such and such quantities (e.g. he would have some length), location (he will be in some place, say, in Lyceum) and so on. The deep insight, however, is that this relation does not necessarily indicate an asymmetrical primacy. In a word, the existence of Callias requires the existence of other things no less than they require the existence of Callias. That seems to be suggesting that, so far, we have given no reason to treat primary substances as absolutely separate from the other secondary categories. These, therefore, cannot be regarded as absolutely separate from the other so-called secondary categories.

Is there a way that we can reasonably argue for Aristotle's rather attractive and apparently intuitive suggestion that primary substances are, well, *primary*? I think the possible answer to this question lies in further reflection on what is to be understood by substance at this point. Only in this way, I mean, only when we distinguish the types of substances and determine the exact kind that is in

[69] See *Met*. Λ, 8, 1073b4 (cf. *Phys*. IV, 1, 208b23).
[70] *Cat*. 2b5-6; *Phys*. I, 2, 185a29-32.

question, may the intuition become secure. We have already seen that there can be three types of substances in Aristotle's system.[71] According to this schema, the NSS and the ESS seem to involve this problem of asymmetry for they always appear as having some kind of categorical determination. Regarding the third type of substance, namely the IS, however, it seems to be that this problem of asymmetry vanishes from sight. For, certainly, IS cannot have a categorical determination, namely that, IS cannot be in place, cannot have magnitude etc. This sufficiently shows that only IS can in reality be regarded as separate, as this kind of substance does not need to have categorical determination, that is, it should not have to be affirmed that IS has some quantity, quality and so on.[72] This shows that what is absolutely be regarded as 'separate' should be the IS and that this type of substance is to be dealt by the metaphysician.

The general upshot of this discussion is that, by virtue of the two criteria, namely, immovability and separation, Aristotle has sufficiently established the grounds for differentiating the three theoretical sciences from each other. Since the science of Being deals with IS, namely God, Aristotle does not hesitate to call this science 'θεολογική'.[73] Aristotle uses the term 'θεολογική' in Book E and Book K somewhat differently from his usual practice. In the Aristotelian corpus, the term and its correlative 'θεόλογος' frequently refer to the poets (e.g. Hesiod) and the mythologies they wrote.[74] Over against this background, in *Metaphysics*, Aristotle introduces a new science that considers God as its prime subject matter and he rightfully renders this science as 'θεολογική', i.e., theological.[75] Contrary to the 'traditional theology' of the ancient poets, this new 'scientific theology' is established upon the rational principles of Being rather than inspiration. The science of God will accordingly reveal the truths

[71] *Phys*. II, 7, 198a29-31; *Met*. Λ, 1, 1069a30-33. See my discussion of several types of substances in the second chapter.
[72] This last point can, of course, only be fully justified after we encounter Aristotle's developments on the nature of IS in Book Λ. For this, see Λ, 7.
[73] *Met*. E, 2, 1026a19. Cf. *Met*. K, 7, 1064a33.
[74] See, for instance, *Meteor*. II, 1, 353a35; *Met*. B, 4, 1000a9; Λ, 6, 1071b27; 10, 1075b26; N, 4, 1091a34.
[75] Note that the noun 'θεολογία', according to Bonitz occurs only in one place in Aristotle (*Meteor*. II, 1, 353a35); instead he uses the adjectival 'θεολογική' to refer to the science of the divine.

with respect to the highest principle of all Being, reflected in the nature that is ultimately separate, immovable and divine.[76] The use of the term in Book E of *Metaphysics* is therefore different from its usual sense on justifiable grounds. Just like Plato, who defined theology as the true knowledge of God,[77] Aristotle does not hesitate to refer to the science that deals with separate and immovable substance, which on the basis of his doctrine can be nothing but God, as 'θεολογική'. According to what Aristotle declares in Book E, the scope of theology is therefore fixed on the eternal, immovable and separate substance, namely God, and not based on the inspirational speculations of the ancient Greek poets.

I have mentioned that, beyond differentiating theoretical sciences, the first section of Book E establishes a hierarchy in these sciences as well. This is confirmed if we take into account what Aristotle says just after his division of sciences: 'And the highest [τὴν τιμιωτάτην] science must deal with the highest genus [τιμιώτατον γένος], so that the theoretical sciences [θεωρητικαὶ] are superior [αἱρετώταται] to the other sciences [τῶν ἄλλων ἐπιστημῶν],[78] and this [theology] to the other theoretical sciences'.[79] No justification has been given for this utterance in Book E; the fact that theology should be regarded as the most superior science is simply stated and Aristotle has left the details to be recovered by his readers.

Is there really any possibility that we may find an answer for the superiority of the science of Being among the other theoretical sciences? What might be the underlying reason for Aristotle's statement that theology is superior to the other sciences?

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[76] *Met*. E, 1, 1026a20. Book E, therefore, is in perfect harmony with Book A, since both correlate the science of Being with the highest principles that can best be reflected in the ultimate substance, namely God.
[77] See *Republic*, 379A-D.
[78] I have already mentioned that the basic reason for regarding theoretical sciences as superior to others lies in their self-reflexive character (see 3.3).
[79] *Met*. E, 1, 1026a21-3.

Part of the answer, I believe, may be found in Aristotle's previous discussion of Wisdom in Book A, where Wisdom is situated at the top of the hierarchy of sciences. My discussion of that section of *Metaphysics* has proved that it is primarily the subject matter of Wisdom that makes this science superior to the other sciences, since several excellences of Wisdom[80] are justified on the basis of its proper subject matter, which, as my analyses have shown, should be nothing but God himself. I believe that in Book E Aristotle might well be maintaining the same line of thought[81] when he states that theology is the highest among the other sciences. In Book A, we are told that the science dealing with higher causes should be regarded as superior because of its comprehensiveness.[82] In Book E, Aristotle, by pronouncing that theology deals with the separate, eternal and immobile, articulates the several features of the highest principle in question. Accordingly, one might justifiably imagine that in Book E what Aristotle offers is an articulation of the highest principle and causes of Book A as being separate and immovable. Hence the conception of Wisdom as the science of the highest principles and causes seems to be entirely in harmony with the conception of theology in Book E, and together they show why this science should be regarded as the highest among others.

The doctrine of Book Γ further supports my claim that the science of Being should deal with a core item that is prior in every way, namely that it should be both ontologically and logically prior to peripherals and that it should fulfil the requirements of causal connectedness if it is to fulfil the requirements of core-dependent homonymy (CDH). We have seen that what is espoused by the core item in that part of the treatise was substance. My discussion has shown that none of the several types of substances other than IS are more suitable for meeting these priority requirements.[83] In agreement with the doctrine of Book Γ, Aristotle now states that the subject matter of the science of Being is God and that it should be called theology. This amounts to saying that God, who is

[80] I have discussed these features of Wisdom in Chapter I.
[81] For which reason, also, he might not wish to be offering a justification of his claim that the science of Being should be regarded as superior to others.
[82] *Met*. A, 2, 982a21-23.
[83] See section 2.4. for the discussion of several types of substances in the CDH of Being.

absolutely prior to all other types of Beings, is the basic object of inquiry of the science of Being rather than any other substance that may be claimed to be the subject matter of the science of Being. Hence Book E confirms and to a degree articulates what has been stated in the previous sections of *Metaphysics* by virtue of affirming that the science of Being should deal with what is separate, eternal and immovable, that is to say, God – for which reason it is called theology – and that it should be regarded as the highest amongst others as it deals with what is ultimately prior.

In all the books of *Metaphysics*, the distinctive feature of the science of Being with respect to the other theoretical sciences seems to lie in its study of the highest Being, that is, its inquiry into God. Book E confirms and emphasises this component of the science of Being and it places this science at the top of all sciences. Because theology deals with what is absolutely prior as opposed to the other sciences that deal with what is ontologically posterior, it should be regarded as superior to all the other sciences. In conformity with this conception, according to Book Γ, physics should be regarded as a 'secondary philosophy' because its subject matter is composed of things that have matter in their natures and are movable.[84] Therefore the privilaged status of the object of theology puts this science in a superior position to the others since, by virtue of its subject matter, which according to the declarations of Book E is separate, eternal and immovable, theology now can fulfil what we have been told with respect to the features of Wisdom in Book A that by virtue of its subject matter it becomes the most universal,[85] most exact,[86] most instructive,[87] most authoritative[88] science amongst others and is desired for its own sake.[89] Furthermore, according to what we are told in Book Γ, the proper subject matter of this science should be prior to all other Beings if it is to fulfil the requirements of CDH. As mentioned, my analyses with respect to the core item

[84] *Met*. Γ, 3, 1005b1; Z, 11, 1037a14.
[85] *Met*. A, 2, 982a21-23.
[86] *Met*. A, 2, 982a25.
[87] *Met*. A, 2, 982a28.
[88] *Met*. A, 2, 982b5.
[89] *Met*. A, 2, 982a30.

in CDH of Being showed that IS is the best candidate for such a role. Book E confirms this by placing God as the proper subject matter of the science of Being. The subject matter of the other sciences is conditioned to the subject matter of theology logically or ontologically or principally; they are either perishable and movable, as in the case of physics, or mere abstractions having no separate existence on their own behalf, as in the case of mathematics. Theology, therefore, should properly be regarded as superior to the other sciences.

3.4. Doctrinal Relations between Book Γ and Book E

I believe upon reflection that one can find deeper doctrinal relations between Book E and Book Γ than I have hitherto attempted to show in this chapter. In this part, I shall be concentrating on the doctrines of Book Γ and Book E in order to show that they exactly parallel each other in view of the fact that we find wide agreement between the theological conception of the science of Being in Book E and Book Γ's conception of CDH. I hope that after this assessment a further step will be taken in an avenue of approach that motivates a more unified conception of the science of Being that stands out in Aristotle's *Metaphysics*.

3.4.1. The Criteria for the Science of Being Developed in Book Γ and Book E

In two of the major treatises of *Metaphysics*, where Aristotle establishes the science of Being, namely in Book E and Book Γ, several criteria are offered upon which the science of Being is constructed. Now, if one wants to show the unity between these two treatises, one must offer some arguments for the criteria suggested in several stages to show that they do indeed complement each other so as to pave the way for a unified conception of the science of Being. Now, if the suggestion I hold is right, the relations between the criteria that have been put forward for the science of Being in Book Γ and Book E should result in a

single harmonious doctrine in which these criteria not only complement each other but also yield to the same conception of the science of Being.

What can be the underlying relation, then, between the criteria put forward in Book Γ and Book E that supposedly pave the way for a single doctrine of the science of Being?

We have seen that one of the criteria suggested for the science of Being in Book E is that of having a separate existence. Taken as referring to a state of a Being, this criterion signifies a thing that is not dependent upon another thing for its existence. This is in accordance with what Aristotle declares in a passage from *Physics*: 'For none of the others can exist independently [χωριστόν ἐστι] except substance [παρὰ τὴν οὐσίαν]; for everything is predicated of substance as subject [πάντα γὰρ καθ' ὑποκειμένου λέγεται τῆς οὐσίας].'[90] According to what we are told in this passage, Beings that are predicated of a subject (i.e. the categories of Being other than substance) are not independent, i.e. separate (χωριστά). The objects of mathematics fall under the category of quantity that can only exist if they are predicated of an underlying subject, namely substance, for which reason they cannot be regarded as separate. Hence, if a Being is to be 'separate' then it should not be predicated of an underlying subject and so it should be self-sufficient in the sense that it should not depend on an underlying subject for its existence. Book Z of *Metaphysics* confirms this: 'For of the other categories none can exist independently [none is separate], but only substance.'[91] Substance, then, is the only thing that can rightly be called 'separate'. The categories of Being other than substance, on the other hand, are not separate Beings since they are all predicated of substance as they owe their existence to some underlying subject, in this case, substance, which provides the support for their existence. According to this conception, only particular

[90] *Phys*. I, 2, 185a31-32. I suggest that the first part of this utterance would be better translated as: 'For none of the other things is separate except substance (...) [οὐθὲν γὰρ τῶν ἄλλων χωριστόν ἐστι παρὰ τὴν οὐσίαν]'.
[91] 'τῶν μὲν γὰρ ἄλλων κατηγορημάτων οὐθὲν χωριστόν, αὕτη δὲ μόνη' *Met*. Z, 1, 1028a33-34.

substances merit being called separate, as they do not depend on another thing for their existence.[92]

I believe the criterion of having a separate existence fits very well with what has been stated in terms of one of the criteria in Book Γ with respect to the CDH of Being, namely, ontological dependence. For recall that ontological dependence requires that an instance, say x, can exist without another instance, say y, but not vice versa. Now, I believe that ontological dependence (OD) exactly reflects what has been suggested by the term 'separate' since, just like OD, separation requires an existence without dependence on another underlying subject. The objects of mathematics are not, therefore, ontologically prior, just as they are not separate, since in the absence of an underlying subject they cannot exist. Substances, on the other hand, are ontologically prior since they are not predicated of another subject by virtue of which they exist but are self-sufficient; they are therefore separate. The separation terminology of Book E therefore is exactly parallel with the ontological dependence criterion of Book Γ.

Whereas the separation criterion can be correlated with OD, it is not sufficient to meet the requirements of causal dependence (CD) that I have stated as thus:

CD: y is ontologically dependent on x iff x is the cause of the existence of y but not vice versa.

The criterion of separation implies solely that a thing cannot have separate existence if it cannot exist in the absence of an underlying subject, but it tells us nothing with respect to the existential causal relations between what is separate and what is not. If, therefore, the criterion of separation were the only one that had been introduced in Book E, the conceptions of the science of Being that one witnesses in the two treatises would not fully overlap. Now, however, we may affirm that with the second criterion that was introduced in Book E the

[92] 'So if the primary substances did not exist it would be impossible for any other things to exist' *Cat*. 2b5-6.

harmony between the proposed subject matter of the science of Being in Book Γ and in Book E is achieved.

Book E states that the subject of the science of Being not only consists of things that are separate but also of those that are immovable (ἀκίνητα). Additionally, we have seen in previous discussions concerning Book Γ that the type of substance that is ultimately immobile is the best candidate to fulfil causal dependence (CD). Now, by introducing the criterion of being immovable, Book E complements the conception of Book Γ, whereby the criteria put forward to establish CDH of Being are satisfied. If Book E solely introduced the criterion of having a separate existence, this would not be sufficient to establish the grounds for the harmony between the conceptions of the science of Being in Book Γ and in Book E; now, with the introduction of the criterion of being immovable, this harmony is fully established.

Book E, therefore, continues the same line of thought that was originated in Book A and systematised in Book Γ. The conceptions of the science of Being described by the criteria put forward for CDH are fully in accordance with the criteria introduced in Book E. Indeed, I believe that these criteria, three of which are originated in Book Γ and two in Book E, can only be fulfilled by the same type of Being, which is the IS. We have already seen that the best candidate for the role of the core item in CDH of Being is IS; Book E confirms this by articulating two further criteria for the subject of the science of Being and explicitly states that the IS, namely God, should be the basic topic of inquiry of the science of Being. In fact, the objects of mathematics cannot fulfil the requirements of CDH nor can the objects of physics meet these requirements. Hence, my supposition that only the IS can fulfil the requirements of CDH seems to be confirmed by what we have been told in Book E with respect to the subject matter of the science of Being.[93]

[93] In Book E, Aristotle excludes accidental Being (κατὰ συμβεβηκός) and Being in the sense of true (ἀληθές) from the realm of the science of Being. These two, as we have seen in the previous chapter, are included in what I have called 'broader manifestations of Being' (see my discussion in 2.3.1. The broader manifestations of Being appear in several places of Aristotelian corpus. For

these senses see, *Met*. Δ, 7, 1017a8-b9; E, 2, 1026a33; Θ, 1, 1045b28; 10, 1051a34-b6.). Aristotle had already exposed accidental Being in his treatment of concepts in Book Δ (*Met*. Δ, 30). In Book E, he excludes this manifestation of Being not only from the scope of the science of Being but also from all scientific treatments (*Met*. E, 2, 1026b3ff. Cf. *Met*. K, 8, 1064b17-1065a6). Now, he gives several reasons for this exclusion. Accidental Being cannot be the object of any scientific inquiry (Aristotle usually gives two examples in his expositions of the accidental Being: the example of 'white' (λευκόν) and 'musical' (μουσικόν) whereby these attributes are combined in a subject, say Socrates, accidentally. For several occurrences of these examples, see *An. Post*. I, 19, 81b24; 22, 83a16; *Top*. V, 4, 133b15-134a4; *Phys*. I, 4, 188a34; II, 3, 195b1; *Met*. Γ, 4, 1007b3; Δ, 2, 1014a4; 6, 1015b16; 7, 1017a7; 1017a19-22; 9, 1018a1; Z, 6, 1031b22) as it is not necessary (see *Met*. E, 2, 1026b27-33; cf. K, 8, 1064b17-1065a6), nor can it be regarded as prior (*Phys*. II, 6, 198a7; *Met*. Γ, 4, 1007a35; K, 8, 1065b2; *EN* I, 6, 1096a22). Accidental Being involves exceptions (*Met*. E, 2, 1026b29-31) that cannot even be said to happen 'for the most part' (*Met*. E, 2, 1026b32-33; 1027a20-21) or that can be regarded as a mere name (*Met*. E, 2, 1026b13), akin to non-Being (*Met*. E, 2, 1026b21). It is indeed quite reasonable for Aristotle to exclude accidental Being from the realm of sciences. When Aristotle's conception of science and his understanding of accident are considered, this exclusion seems imperative. Accident refers to a relative and temporary property of a thing (*Top*. I, 5, 102b21) that may or may not be connected to the subject that it happens to accompany (*An. Post*. I, 6, 75a20; *Top*. IV, 1, 120b34). The nature of accident, therefore, is not suitable for a science. Indeed, Aristotle frequently contrasts accidental Being with necessary Being (see, for instance, *An. Post*. I, 4, 73b4; 11; 6, 74b12; 75a19; 19, 81b24; *Phys*. II, 1, 192b23; VIII, 5, 256b10; *Met*. Δ , 30, 1025a14; E, 2, 1026b27-33 [cf. *Met*. I, 1, 1052a19; K, 8, 1064b17-1065a6; *EN* VIII, 3, 1156b11, 8, 1159a18]). His conception of science, however, requires that all sciences should deal with what is necessary (*An. Post*. I, 6, 75a30). They therefore cannot treat accidental Being. Accidental Being should therefore be the first thing that is to be excluded from the realm of sciences for it cannot be the object of a scientific inquiry (*An. Post*. I, 6, 75a19; 75a31; *Met*. E, 2, 1027a20; K, 8, 1064b17). Furthermore, Aristotle's conception of science necessitates that any inquiry, if it is to be regarded as scientific, should focus on the causes (*An. Post*. I, 2; *Phys*. I, 1, 184a10 [cf. II, 3, 195b22]; *Met*. A, 3, 983a25 [cf. H, 4, 1044a32]). The causes of the accidents, however, are accidents themselves (*Met*. Δ, 30, 1025a25; E, 2, 1027a7 [cf. *Int*. 9; 1065a6]). Since sciences inquire into the necessary causes of things, accidents should be excluded from the scope of any scientific inquiry. Sciences not only deal with what is necessary but also with what is universal (*Met*. E, 1027a20. See *An. Post*. I, 4, 73b25ff. and *Met*. Δ, 9, 1017b35 for how Aristotle correlates universal with necessary). Accidents cannot, however, be regarded as universal properties of things and therefore cannot generate the focus of inquiry of any science. Hence, because of their indeterminate nature, and because they are innumerable and indefinite (*Phys*. II, 5, 196b26; *Met*. K, 8, 1065a25), accidents cannot be involved in the scope of any science. Even though they should be regarded as Beings (*Met*. E, 2, 1027a16) they do not merit being involved in the scope of the science of Being. Hence, the case of one of the manifestations of Being enumerated in the broader list of several manifestations of Being is settled.

Just like accidental Being, 'Being in the sense of true' is also excluded from the scope of the science of Being. The reason for this exclusion is plainly stated by Aristotle: 'for falsity and truth are not in things [ἐν τοῖς πράγμασιν] (...) but in thought [ἀλλ' ἐν διανοίᾳ]' (*Met*. E, 4, 1027b25). True and false are solely concerned with the combination or separation of concepts in understanding and therefore they have no existence outside the mind. For Aristotle, the real Being that exists outside the mind has absolute priority over the judgements that address these factual Beings: 'It is not because we think [ἡμᾶς οἴεσθαι] that you are white [σε λευκὸν] that you *are* white, but because you are white [ἀλλὰ διὰ τὸ σὲ εἶναι λευκὸν]... we who say this have the truth [ἡμεῖς οἱ φάντες τοῦτο ἀληθεύομεν]' (*Met*. Θ, 10, 1051b7). Hence, the factual Being outside the mind is the simple fact that decides whether our judgement is true or false. If in actuality contradictory attributes are combined, we always reach non-Being in the sense of false. Hence, if we try to combine what is always separate, or if we try to separate what is always combined, our judgement will always be false (*Met*. Θ, 10, 1051b9). The judgements concerning accidentals, on the other hand, may sometimes be true and sometimes false (*Met*. Θ, 10, 1051b12). Indeed, it is possible that an accidental attribute may cease to be combined with what

3.5. Conclusion

Aristotle has already shown in Book Γ that the basic focus of inquiry of the science of Being is what he calls Being qua Being. In the same treatise, we have seen that studying Being qua Being, that is, studying what it means for something to be, is only possible through a special kind of structure that allows Aristotle to unify the science of Being, namely, CDH. Hence, the study of Being qua Being can only be conducted through the necessary relations found between the core item and the peripheral instances of Being. This structure prompts us to think that the core item should be prior in several ways. In Book E, what Aristotle has been saying is in line with what we have previously been told in Book Γ. The requirements of CDH, especially ontological and logical dependence, seem to be in perfect harmony with the further requirements that have been brought to the fore in Book E, namely separation and immovability. Furthermore, as we have seen, Aristotle's appointment of 'what it is' and 'if it is' to the science of Being is also in harmony with two of the criteria of CDH, namely ontological and logical dependence. These, I think, sufficiently show that Book Γ and Book E are in alignment with each other in terms of the doctrine of the science of Being.

I have mentioned that in Book Γ, although Aristotle hinted what might be the proper referent of the core item in the CDH of Being by virtue of stating that it should be 'substance', this nevertheless was quite ambiguous in the sense that it was not clear which among the several types of substances is the best candidate

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it is initially combined with or may be combined with what it is initially separated from. Since accidents may change, the judgements concerning these accidents will accordingly be true at one time and false at another time. The case of necessary Beings, however, is different. What is free from all potentiality and matter and therefore unchanging is always true (*Met*. Θ, 10, 1051b15; 1052a4). Since these things are eternal and do not change, the truths about them do not change either. Hence, as Aristotle states, there can be no falsity concerning these objects but only ignorance (ἀγνοεῖν; see *Met*. Θ, 10, 1051b25). Therefore, what Aristotle calls 'Being as true' can merely be regarded as a judgement of the mind that pertains to Being only in thought, however, is incapable of existing outside in things. For this reason it should be excluded from the scope of the science of Being. The metaphysician deals with real things, namely, with 'ὄν κυρίως'. Being in the sense of true, however, is merely dependent on 'ὄν κυρίως' that has no existence on its own and falls outside the interest of the metaphysician.

for standing as the core item in the CDH of Being. Given the doctrinal harmony between Book Γ and Book E we can safely argue that some progress has been achieved through Aristotle's enterprise in Book E. Since these books are in line with each other in terms of the approach to criteria upon which the science of Being is established, one might reasonably claim that Book E makes important progress by detecting IS as the basic subject matter of the science of Being. This may well amount to saying that the core item in the CDH of Being established hitherto in Book Γ is determined as IS in Book E. This is also in line with what I suggested in the previous chapter, i.e. that the most suitable candidate amongst the types of substances for the role of being the core item in the CDH of Being is IS. Hence, after the progress attained in Book E, we have sufficiently understood that the universal science of Being that Book Γ has been espousing can be reached through the core item that is 'first' and immobile and separate:

> One might indeed raise the question whether first philosophy [πρώτη φιλοσοφία] is universal [καθόλου], or deals with one genus [περί τι γένος], i.e. some one kind of being [φύσιν τινὰ μίαν]; for not even the mathematical sciences are all alike in this respect; geometry and astronomy deal with a certain kind of thing [περί τινα φύσιν εἰσίν], while universal [καθόλου] mathematics applies alike to all. We answer that if there is no substance other than those which are formed by nature [φύσει συνεστηκυίνας], natural science [ἡ φυσικὴ] will be the first science [πρώτη ἐπιστήμη]; but if there is an immovable substance [οὐσία ἀκίνητος], the science of this must be prior [προτέρα] and must be first philosophy [φιλοσοφία πρώτη], and universal in this way, because it is first [καθόλου οὕτως ὅτι πρώτη]. And it will belong to this to consider being qua being – both what it is [τί ἐστι] and the attributes which belong to it qua being [τὰ ὑπάρχοντα ᾗ ὄν].[94]

According to what we have been told in this passage, if the science of Being were not to be theological, that is, if it were not to deal with the highest kind of substance, it would not be universal either. We have already seen that this is what one might derive from Aristotle's discussion of CDH of Being. Now, in Book E the most significant constituent of this structure, namely IS, is included in the picture. Both treatises are perfectly in line with each other in their conception of the science of Being. The harmony between the two treatises of *Metaphysics*, that is, between Book Γ and Book E, shows how, to Aristotle's mind, the problem of the unity of general and special metaphysics is averted.

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[94] *Met*. E, 1, 1026a23-32.

The universality of the science of Being is attained through the homonymous structure of Being in which the study of the primary instance paves the way for the study of the secondary instances through the necessary connections found between these items of CDH. Book E agrees with this conception; what is absolutely prior now explicitly presents itself as God, so all the requirements assigned to the science of Being are fulfilled. The basic structure is supplied by Book Γ, and the scope is further developed by Book E. Aristotle, then, is right when he states that the science of Being is universal because it is first, which amounts to saying that through the study of the highest instance of Being that is absolutely prior, the investigation spreads to all departments of Being. The ordered homonymous structure of Being and the nature of the object of the science of Being determined as eternal, separate and immovable allow for such a conception. The science of Being, therefore, can be regarded as universal only by virtue of the fact that it is a theological science, and studies the highest instance of Being, that is, God.

CHAPTER IV

4.1. Introduction

The doctrine that has been shaped in the previous treatises of *Metaphysics* has shown sufficiently that the main task of a metaphysician is to study substance. The analysis of core dependent homonymy (CDH) upon which the science of Being is established in Book Γ has proved that the best candidate among the several types of substances to be assigned for the interest of the metaphysician is Immobile Substance (IS), namely God. This conception is confirmed and further developed in Book E, which articulates the kind of substance in question by introducing two additional criteria for the subject of the science of Being, namely that it should deal with what is separate and immovable. This metaphysical outlook, having been established in Book Γ and Book E, provides the backdrop against which the import of Aristotle's investigations in the central books of *Metaphysics* (i.e. Z, H, Θ) will be gauged in the present chapter.[1] Hence, in this chapter, I shall be dealing with the central books of *Metaphysics*, whereby I aim to show that the evidence to be found in these treatises supports my previous argument with respect to God as the core of CDH of Being. I will present three arguments in support of this claim. The first one employs Aristotle's discussion of the priority of actuality over potentiality, whereby I aim to show that the ontological dependency requirement of the CDH of Being can only be fully met by God, for which reason, among the other types of substances that I have discussed in chapter II (i.e. non-eternal sensible substances (NSS) and eternal sensible substances (ESS)) only God (i.e. the Immobile Substance (IS)) is to be regarded as the core of the CDH of Being. Second, I will examine the criteria put forward in the central books for substance-hood. I will show that these

[1] I do not mean to, in this part, to embark on a full discussion of Aristotle's theory of substance as it emerges in the central books of *Metaphysics*. Rather, I am content to glance at these treatises in the light of what has been stated in the previous sections of *Metaphysics* and inquire into the elements of Aristotle's discussion that may be put forward in order to support my ongoing argument with respect to the scope of the science of Being.

criteria, together with Aristotle's general conception of substance affirm that the main talk of a metaphysician is to study the pure form, namely, God. This, in turn, will prove that the conception of the science of Being in Aristotle's mind while he writes the central books is eminently theological and is in line with the previously held conception of the science of Being that we encounter in Book Γ and Book E. Finally, I will turn my attention to the discussion of essence in the central books, whereby I aim to show that what Aristotle maintains in the central books with respect to definition proves that among the other types of substances (i.e. NSS and ESS) only God can fulfil the requirements of the logical dependence, for which reason He is to be regarded as the core item of the CDH of Being.

My reading of the central books, therefore, primarily concentrates on the harmony between the conception of the science of Being that stands out in the previous treatises of *Metaphysics* and the statements that are encountered in the central books.

4.2. Substance in Priority

While commenting on Book Γ in chapter II, I have mentioned that several dependency relations between the core item and the peripherals must be observed in the core-dependent homonymy (CDH) of Being. One of these dependency relations was the ontological dependence. I think by virtue of the analysis of the priority of substance – and for that matter the priority of form over matter presented in the central books of *Metaphysics* – Aristotle has achieved a considerable development with respect to his previous enterprise encountered in Book Γ. The analyses that we come across in the central books, once read together with the previous analysis that we encounter in Book Γ, might lead one to find further evidence with respect to the first and more importantly the second level intra-categorical ontological dependency relations in the CDH of Being. For that matter, also, as one proceeds through the lines of the central books of *Metaphysics*,

one might find some evidence with respect to what might be the actual referent of the 'substance' quite ambiguously stated as the core item in the CDH of Being in Book Γ.

In this part, I aim to reveal the implications of Aristotle's enterprise with respect to the ontological priority of substance that we encounter in the central books on what has been previously stated with respect to the CDH of Being in Book Γ. An assessment of how Aristotle establishes the ontological priority of substance – and for that matter the priority of form over matter in the central books – will most importantly reveal the basic structure of the second level of ontological dependency relations that can be encountered in intra-categorical relations, that is, between substances, the analysis of which in turn shows that Immobile Substance (IS), the pure form, should be regarded as ontologically prior in the absolute sense to all other substances that one might encounter in the Aristotelian universe.

In Book Z, one can find Aristotle reflecting on ontological dependence at the first level, that is, between inter-categorical relations. Among several manifestations of Being, namely the so-called secondary categories, substance is taken to be the primary, for none of the secondary categories can exist without the initial existence of substance:

> … for none of them is either self-subsistent [καθ' αὐτὸ πεφυκὸς] or capable of being separated from substance [χωρίζεσθαι δυνατὸν τῆς οὐσίας], but rather, if anything, it is that which walks [τὸ βαδίζον] or is seated [τὸ καθήμενον] or is healthy [τὸ ὑγιαῖνον] that is an existent thing [τῶν ὄντων]. Now these are seen to be more real [μᾶλλον φαίνεται ὄντα] because there is something definite which underlies [ὑποκείμενον] them; and this is the substance [οὐσία] or the individual [τὸ καθ' ἕκαστον], which is implied in such a predicate [ἐν τῇ κατηγορίᾳ]; for 'good' [τὸ ἀγαθὸν] or 'sitting' [τὸ καθήμενον] are not used without this [οὐκ ἄνευ τούτου λέγεται]. Clearly then it is in virtue of this category that each of the others *is* [διὰ ταύτην κἀκείνων ἕκαστον ἔστιν]. Therefore that which is primarily [τὸ πρώτως ὂν] and *is* simply [ὂν ἁπλῶς] (not is something) must be substance [ἡ οὐσία].[2]

[2] *Met*. Z, 1028a22-31.

The passage tells us that none of the other categories can exist without the existence of substance; rather, they exist 'in virtue of substance', which is, therefore, ontologically prior to all those that are said to have no separate existence from the primary category. Substance, however, can exist separately and therefore it should be regarded as ontologically prior.

One might reasonably think that the example in Aristotle's mind employed to assist him in explaining ontological priority of substances is a particular man, like Callias or Socrates, to whom several qualities are linked and who is a non-eternal sensible substance (NSS). On the basis of this example, one might reasonably conclude that my thesis favouring IS as the best candidate to fulfil the requirements of ontological dependence is not correct for, as observed in the passage, NSS rather than IS are used to exemplify the point. The examples given in the above passage (i.e., what 'walks' or is 'seated' or 'healthy'), in other words, show that the type of substance at stake is one of the NSS rather than IS. If Aristotle has in mind the IS, as I suggest, why then does he employ NSS to clarify the ontological dependence that is found between the secondary categories and the category of substance?

I will address this question and use it as a stepping stone to explicate further my thesis defending IS as the best candidate among other substances for standing as the core item in CDH of Being by virtue of meeting the requirements of ontological dependence far better than the other candidates that may be said to be ontologically prior. I should note at the outset that there is nothing contradictory to my thesis in this example, which favours NSS as the core item in the CDH of Being when the first level in ontological dependence is considered. I have already put forward to the view that NSS are indeed proper candidates for standing as the core item if the analysis is made between secondary categories and substance. However, this will not show that NSS are the proper candidates for standing as the core item in the CDH of Being *in the absolute sense* for there is another level, that is

the second level in ontological dependence, working in between substances that can only be fulfilled through the highest substance, as I have explained in chapter II. The science of Being thereby cannot be unified through NSS, for not all Beings in the universe are connected to these by means of ontological dependence, which thereby shows that the study of NSS cannot propagate through all the instances of Being, which in turn would not lead to the universal science of Being that we are advocating.

Furthermore, I it is natural that Aristotle employs NSS to demonstrate the ontological dependence between secondary categories and substance, for this is in line with Aristotle's general procedure in presenting a theory according to which we should proceed from 'what is knowable by us' to 'what is knowable in nature'.[3] Aristotle's intention in this passage is to *explain* that substance is ontologically prior to other categories, rather than to articulate which of the several types of substances is the best candidate for fulfilling the requirements of ontological dependence *in* the CDH of Being, which is supposed to pave the way for a single investigation of the several manifestations of Being. It is one thing to explain what ontological dependence is and another to use it as a tool to establish the CDH of Being. In accordance with his general procedure, Aristotle starts from 'what is knowable by us', namely, from NSS, and we expect that he will proceed to 'what is knowable in nature'. This expectation will most certainly be fulfilled in the course of the central books, as we shall see soon. The above passage, therefore, can be seen as an introduction for the reader or the listener to the subject by starting from what he/she knows best; this will be followed by more detailed discussions that further explicate the nature of ontological dependence by virtue of which Aristotle will take his listeners or readers to what is not familiar and knowable to them in the first stages of the argument.

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[3] For some of the passages in which Aristotle presents this distinction, see: *An. Pr.* II, 23, 68b35; *An. Post*. I, 2, 72a3; *Top*. VI, 4, 141b4; 141b25; *Phys*. I, 1, 184a16–21; 5, 188b32–189a5; II, 1, 193a5; *Met*. Z, 3, 1029b8; *EN* I, 4, 1095b2–3; 7, 1098b3–8.

Having stated that substance is ontologically prior to other categories, Aristotle turns his attention to other priorities of substance:

> Now there are several senses in which a thing is said to be primary [τὸ πρῶτον]; but substance is primary in every sense [πάντως ἡ οὐσία πρῶτον] – [A] in formula [λόγῳ], [B] in order of knowledge [γνώσει], [C] in time [χρόνῳ]. For [C] of the other categories none can exist independently [οὐθὲν χωριστόν], but only substance [αὕτη δὲ μόνη]. And [A] in formula [τῷ λόγῳ] also this is primary; for in the formula of each term [ἐν τῷ ἑκάστου λόγῳ] the formula of its substance [τὸν τῆς οὐσίας] must be present [ἐνυπάρχειν]. And [B] we think we know each thing most fully, when we know what it is [τί ἐστιν], e.g. what man is or what fire is, rather than when we know its quality, its quantity, or where it is; since we know each of these things also, only when we know *what* the quantity or quality *is* [ὅταν τί ἐστι τὸ ποσὸν ἢ τὸ ποιὸν γνῶμεν].[4]

This is densely packed reasoning and has to be treated in context. It is not immediately clear why Aristotle asserts that substance is prior in time [C] because it is separate. If we take into account what Aristotle asserts just before this passage with regard to the ontological dependency of other categories over substance, one can infer that the term 'separate' [χωριστόν] addresses a distinction between the secondary categories and substance, namely that the secondary categories are not 'separate from substance'. If we admit that the secondary categories cannot have any existence without the initial existence of substance, then this may shed light on what Aristotle tries to maintain by stating that substance is prior in time. The fact that the other so-called secondary categories can exist only if we assert in advance that there is something that underlies these instances – as maintained in the previous lines of Book Z – substance should indeed be prior in time. Without first asserting that substance exists, we cannot affirm that the other so-called secondary categories exist, for, as we are told in the previous lines, these secondary categories are said to exist 'by virtue of substance' [διὰ ταύτην κἀκείνων ἕκαστον ἔστιν-1028a29-30].

[4] *Met*. Z, 1, 1028a31-1028b2.

The other two priorities – namely, the priority in [A] definition and [B] knowledge – are closely related to each other. They may even be regarded as almost identical; for recall that, in Book A, Aristotle asserted that to know something is to know the 'why', i.e., the reason of that thing.[5] Recall also that Aristotle's conception of definition is causal in the sense that to give an account of something is to give the reason why that thing happens. The definitions in Aristotelian doctrine are causal in this way, for they address the reason why something happens while giving the account of the very same thing. Now if to know a thing requires that we know the cause of that thing, then this amounts to saying that knowing is nothing but knowing the account of the thing in question, simply because in constructing definitions we give the reason of the thing that is being defined.[6] If, therefore, something is definitionally prior, then this means that it is prior in knowledge as well.

What it is to be prior in definition, according to the above passage, corresponds to what I have previously explained as logical priority. If the definition of x requires the definition of y in the sense that the definition of the former is produced by referring or including the definition of the latter, then the former can be said to be logically prior to the latter. To construct a definition of x, therefore, one should construct initially the definition of y. In such a case y is both logically (i.e., definitionally) prior to x and prior in knowledge. These two priorities, therefore, go hand in hand. This is exactly what we observe between the secondary categories and the first category of substance, for whenever we attempt to define a secondary category we must refer to substance. Qualities, therefore, are the qualities *of* substance and similarly with all the other categories. A quality is nothing but a quality-in-a-substance. Substance, in this way, is prior both in

[5] *Met*. A, 1, 981a29. See also, *An. Post*. I, 13.
[6] 'For there is knowledge of each thing only when we know its essence.' (*Met*. Z, 6, 1031b6-7) The 'essence' in this passage corresponds to τὸ τί ἦν εἶναι, which is not exactly the same as τί ἐστιν. I will consider later the differences between these two terms and whether it is possible to identify them with each other.

definition and in knowledge, that is, self-subsistent in the sense that, unlike the other categories, it is not in need of reference to any other category to be defined, to exist and to be known.

The priorities, as explained in this part, are systematically connected to each other; all of them spring from the claim that substance is separate. The knowledge, the definition and the existence of other categories depend on substance. If secondary categories could exist, be defined and be known without substance, this would amount to saying that they are separate Beings. Aristotle's doctrine of Being, however, does not allow for such a conception. The necessary reference between these secondary categories by way of which they exist, are defined and known underlies the claim that the study of substance leads to the study of the other categories through CDH. I will now attempt to deepen my investigation further in order to justify this claim by placing the proposed priorities of substance over other categories into CDH, upon which the science of Being is constructed.

In order to grasp the way in which the central books complement each other in the discussion of CDH and the developments attained in this part of *Metaphysics* with respect to the subject matter of the science of Being, it is important to link what Aristotle maintains in the opening chapter of Book Z to his discussions in Book ϑ with respect to the priority of actuality over potentiality and for that matter the priority of form over matter. The focus of discussion in Book Z is centred upon the first level relations in ontological dependence between substance and the other so-called secondary categories. The focus of discussion shifts in Book ϑ when Aristotle turns his attention from inter-categorical relations to intra-categorical relations. By way of his discussion in Book ϑ, as he explains the priority of actuality over potentiality, Aristotle articulates the second level relations in ontological dependence. This shift in focus of the discussion with respect to priority of substance carries the investigation from NSS to IS as we shall soon see. Hence, I believe, the discussion that we encounter in Book ϑ may be employed to

assemble clues among the several types of substances as to which one is the most suitable candidate to be placed at the centre of the CDH of Being. In what follows, accordingly, I will first briefly investigate Aristotle's argument in which he maintains that actuality is prior to potentiality. I will then discuss by what means this discussion might be employed to determine the type of substance that stands at the centre of interest of a metaphysician.

As substance is prior to the other secondary categories in knowledge and definition, so actuality is prior to potentiality in definition and knowledge:

> Clearly it [actuality] is prior [προτέρα] in formula [τῷ λόγῳ]; for that which is in the primary sense potential is potential because it is possible for it to become actual [τῷ γὰρ ἐνδέχεσθαι ἐνεργῆσαι δυνατόν ἐστι τὸ πρώτως δυνατόν], e.g. I mean by 'capable of building' [οἰκοδομικὸν] that which can build [τὸ δυνάμενον οἰκοδομεῖν], and 'by capable of seeing' [ὁρατικὸν] that which can see [τὸ ὁρᾶν], and by 'visible' [ὁρατὸν] that which can be seen [τὸ δυνατὸν ὁρᾶσθαι]. And the same account applies to all other cases, so that the formula [τὸν λόγον] and the knowledge [τὴν γνῶσιν] of the one must precede [προϋπάρχειν] the knowledge of the other.[7]

We are informed that what is potential can be defined and known by the consequent actuality to which that potentiality is linked. The knowledge of the act, e.g. building, seeing or being seen, precedes the knowledge of the potential, e.g. capable of building, capable of seeing, or being visible. Had there been no act we could not know the potentialities. If, in other words, there were no actual building, no actual seeing or nothing that is visible, we could not know whether there exists some potentiality to build, to see or being seen. Similarly, what is potential is defined by the corresponding act simply because all potentialities are potentialities *of* acts. The fact that 'being capable of building' cannot be defined without the act of 'building' is plain. Actuality therefore precedes potentiality in definition and knowledge.

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[7] *Met*. Θ, 8, 1049b12-17.

The eighth chapter of Book Θ also gives two arguments for the priority of actuality over potentiality in time. What Aristotle maintains in the first of these arguments is quite uncomplicated and it goes as such:

> In time [τῷ δὲ χρόνῳ] it [actuality] is prior [πρότερον] in this sense: the actual member of a species is prior to the potential member of the same species, though the individual is potential before it is actual. I mean that the matter [ἡ ὕλη] and the seed [τὸ σπέρμα] and that which is capable of seeing [τὸ ὁρατικόν], which are potentially a man [δυνάμει μέν ἐστιν ἄνθρωπος] and corn [σῖτος] and seeing [ὁρῶν], but not yet actually so [ἐνεργείᾳ δ' οὔπω], are prior in time to this particular man who now exists actually, and to the corn and to the seeing subject; but they are posterior in time to other actually existing things [ἕτερα ὄντα ἐνεργείᾳ], from which they were produced [ἐξ ὧν ταῦτα ἐγένετο]. For from the potential [ἐκ τοῦ δυνάμει ὄντος] the actual is always produced [γίγνεται] by an actual thing [ὑπὸ ἐνεργείᾳ ὄντος], e.g. man by man [ἄνθρωπος ἐξ ἀνθρώπου], musician by musician [μουσικὸς ὑπὸ μουσικοῦ]; there is always a first mover [κινοῦντός], and the mover already exists actually [τὸ δὲ κινοῦν ἐνεργείᾳ ἤδη ἔστιν].[8]

Aristotle accepts that that which is generated comes from its potentiality, but this fact does not prevent him insisting that actuality is prior to potentiality in time, for everything that is generated requires an actual thing that exists before the generated thing. Man, therefore, comes from what is potentially man. However, before what is potentially man, Aristotle believes, one should postulate an actual man simply because man is produced from man. If there were no actual man, there would be no potential man either. Hence, what actually exists comes before what is potential and actuality is prior to potentiality in time.

Aristotle gives a further argument in which he applies the learning process to support his point:

> This is why it is thought impossible to be a builder [οἰκοδόμον] if one has built nothing [μὴ οἰκοδομήσαντα μηθὲν] or a harpist [ἢ κιθαριστὴν] if one has never played the harp [μηθὲν κιθαρίσαντα]; for he who learns to play the harp [μανθάνων κιθαρίζειν] learns to play it by playing it [κιθαρίζειν], and all other learners do similarly.[9]

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[8] *Met*. Θ, 8, 1049b17-27.
[9] *Met*. Θ, 8, 1049b29-32.

Without an initial actual playing of the harp, one cannot learn to play the harp. In general, every generation requires an initial generated actual thing from which it originates. That is why actuality is always prior to potentiality in time.

Having shown that actuality is prior in time Aristotle turns his attention to priority in substance. This amounts to saying that actuality is to be regarded as more real [μᾶλλον φαίνεται ὄντα] and more substantial. It also amounts to saying that the nature of substance is better reflected in actuality than in potentiality. The background against which Aristotle's assertion that actuality is prior to potentiality in substance is the well known inclination towards 'Being' against 'becoming' that stands out in almost all Greek philosophers. Aristotle makes his point by way of several arguments, and these are particularly significant in terms of the aims of my discussion of priorities. His first argument proceeds as such:

> But it [actuality] is also prior in substance [οὐσίᾳ]; firstly, because the things that are posterior [ὕστερα] in becoming [τῇ γενέσει] are prior [πρότερα] in form [τῷ εἴδει] and in substance [τῇ οὐσίᾳ], e.g. man [ἀνὴρ] is prior to boy [παιδὸς] and human being [ἄνθρωπος] to seed [σπέρματος]; for the one already has its form [ἔχει τὸ εἶδος], and the other has not [τὸ δ' οὔ].[10]

What has already been generated, that is, what already has a form, should be regarded as prior to what will be realized as form. The human being, in this way, should be regarded as prior to seed although, in the process of becoming, seed comes first. The human being in this way has been realized, for the sake of which it is generated and has a form. Seed, on the contrary, comes first in the process of generation but it has yet to have achieved form. Contrary to the human, the seed in its nature reflects 'becoming' rather than Being. This is closely linked to what Aristotle presents as a second argument to show that actuality is prior to potentiality in substance, which is stated as follows:

> Secondly, because everything that comes to be moves towards a principle [ἀρχὴν], i.e. an end [τέλος]. For that for the sake of which [τὸ οὗ ἕνεκα] a thing is, is its principle [ἀρχὴ], and the becoming [γένεσις] is for the sake of the end [τοῦ

[10] *Met*. ϑ, 8, 1050a4-7.

> τέλους δὲ ἕνεκα]; and the actuality is the end [τέλος δ' ἡ ἐνέργεια], and it is for the sake of this that the potentiality [ἡ δύναμις] is acquired.[11]

It is important to note two things in order to understand better what Aristotle maintains in this argument. The first is that Aristotle's world is teleological; everything that can be found in the Universe[12] tends towards an end [τέλος], which is prior to everything that is inclined towards it. The second is that it is possible to identify form with actuality and matter with potentiality. The latter point is explicitly affirmed immediately after this argument: 'Further, matter exists in a potential state [ἡ ὕλη ἔστι δυνάμει], just because it may attain to its form; and when it exists *actually* [ἐνεργείᾳ], then it is in its form [εἴδει]'.[13] What has attained form is an actualized thing that should be regarded as prior to what is potential. The one that has not achieved its goal, i.e., its matter, is not yet actualized and is in the process of becoming. The actual thing, on the other hand, has achieved that for the sake of which it is generated. Potentiality exists, therefore, for the sake of actuality and inclines towards that actuality to attain its end.[14] The final cause, in this argument, is reduced to the formal cause; the one that achieves its goal is regarded as the one that has the form.[15] Hence, form, actuality and the final cause are identified with each other, and all are prior to matter and potentiality.[16]

Most significant of all, however, is Aristotle's argument in which he employs his conception of the universe in order to show that actuality is prior to potentiality in substance:

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[11] *Met*. ϑ, 8, 1050a7-10.
[12] With the exception of God, who is the goal and end for everything else. I shall deal later with this point.
[13] *Met*. ϑ, 8, 1050a15-16.
[14] 'The truth is that what desires the form is matter, as the female desires the male and the ugly the beautiful…' *Phys*. I, 9, 192a22.
[15] I will later deal the details of the possibility of reduction of the final cause to formal cause in chapter V.
[16] This sketch of the priority of actuality over potentiality and the identification of formal and final causes with each other does not do the issue justice. However, the present aim is simply to provide a general background for the discussion about what might be attained through the course of the central books with respect to CDH.

> But actuality is prior in a higher sense [κυριωτέρως] also; for eternal things are prior in substance to perishable things [ἀΐδια πρότερα τῇ οὐσίᾳ τῶν φθαρτῶν], and no eternal thing exists potentially [οὐθὲν δυνάμει ἀΐδιον]. The reason is this. Every potentiality is at one and the same time a potentiality of the opposite [ἀντιφάσεώς]; for, while that which is not capable of being present in a subject cannot be present, everything that is capable of being present may possibly not be actual. That, then, which is capable of being [δυνατὸν εἶναι] may either be or not be [εἶναι καὶ μὴ εἶναι]; the same thing, then, is capable both of being and not being. (…) 1050b18: Nor can anything which is of necessity [ἐξ ἀνάγκης] be potential; yet these things are primary [πρῶτα]; for if these did not exist, nothing would exist [εἰ γὰρ ταῦτα μὴ ἦν, οὐθὲν ἂν ἦν].[17]

The basic idea employed in this passage is that eternal and necessary substances (these include ESS and IS) should be regarded as prior in substance to perishable substances (NSS) that exist potentially.[18] Unlike perishable substances (NSS), eternal substances are not subject to generation and corruption. The latter, therefore, should be regarded as eternal actualities. Since potentiality is at the same time the potentiality of the opposite, the natures of non-eternal substances (NSS) pave the way for a certain possibility for them to exist and not to exist. The ESS and IS, on the other hand, are the ones that exist eternally and therefore are always in actuality. Hence, while NSS are contingent, the eternal substances are necessary. There can be no possibility for them not to exist at a given time, which is a possibility for NSS, as they are merely potential Beings capable of Being and not Being. Hence, eternal substances merit being called Being more than NSS, for they are eternally real. On the other hand, 'becoming' rather than 'to be' is reflected in the nature of NSS as they are subject to generation and corruption. Actuality, therefore, is prior to potentiality in substance simply because it is better reflected in the eternal natures of ESS and IS that are prior to NSS. Aristotle tellingly adds that if there were no eternal actualities, there would be no Being at all, for Beings other than these eternal actualities are mere potentialities of Being that cannot guarantee the eternal existence of the universe. The details of this argument will be given

[17] *Met*. ϑ, 8, 1050b6-19.
[18] Cf. *Met*. B, 4, 999b5; Z, 7, 1032b30; Λ, 6-7.

further in Book Λ but this much is enough to show that actuality is prior to potentiality in substance.[19]

At this stage, we can adapt the discussion regarding the priority of actuality over potentiality to the CDH of Being so as to pave the way for a further step towards a better understanding of the actual subject matter of the science of Being. It is at once clear that substance should be the core element that is to be employed to establish the science of Being through CDH in the level of Book Γ and Book Z. What is not clear in the level of these treatises, however, is which of the several types of substances can fulfil the requirements for the role of being the core item in the CDH of Being, for this requires a further hylomorphic analysis into the nature of substance. This amounts to saying that, without an inquiry into the second level in ontological dependence that works in between several types of substances, we would not be able to determine which of the several types of substances should be placed at the core of the CDH of Being. The discussion of the priority of actuality over potentiality represents such a shift in the scale of the investigation, whereby one has to trace the clues as to which of the several types of substances is envisaged as the primary term in CDH of Being.

What is now most certainly established in the level of Book ϑ is that, within substance, some elements are prior to others and should be regarded as reflecting most truly the nature of substance. The science of Being will study substance for it is prior to all the other categories. It does not study every kind of substance that can be found in the Universe on its own behalf, however; but rather that which is absolutely prior not only to the other secondary categories but also to all other kinds of substances. For that matter, it will study the actual substance, for just as

[19] The priority of actuality over potentiality is demonstrated in the ninth chapter of Book ϑ as well. This argument shows that actuality tends only to the good while potentiality can be good or bad (*Met*. ϑ, 9, 1051a4-21), for which reason the former should be regarded as prior to the latter. As a final step, Aristotle gives a geometrical demonstration of the priority of actuality over potentiality (*Met*. ϑ, 9, 1051a21-33). I will not, however, inquire into these arguments due to limitations of space.

substance is prior to the other categories, the actual substance is prior to potential substances. By virtue of establishing the grounds for the priority of actual substance over what is potential, Aristotle's investigation in Book Θ shows sufficiently that the substance that is in the state of actuality *par excellence* should be regarded as prior to all other types of substances in the absolute sense. The discussion of the priority of actuality over potentiality, therefore, gives certain clues concerning the kind of substance that Aristotle has in mind while he establishes the science of Being. The fact that actual substances (including, according to Aristotle's discussion, the ESS and IS)[20] are prior to the non-eternal sensible substances whose nature involves potentiality yields the result that the science of Being studies these actualities. For, in virtue of these actual substances, as we are informed, all the other potential substances exist. Need one be surprised, then, by the fact that Aristotle emphasizes the priority of eternal substances while he discusses the priority of actuality over potentiality? I believe Aristotle has a deliberate purpose when he places the eternal substance at the centre of his discussion of priorities of act. The inclination in the central books is always towards what is actual.[21] In my interpretation, then, the central books can be regarded as a bridge that carries the listeners or readers from what is sensible to what is not, from NSS to ESS and IS. The investigation is in perfect harmony with the Aristotelian dictum that we should proceed from what is knowable by us towards what is knowable in nature. The whole picture, however, is not yet established before the developments achieved in Book Λ.

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[20] According to Aristotle's declarations in Book Θ, these include not only the IS but also the ESS. Aristotle's discussions of the priority of act certainly give clues that we should regard IS, among the actual substances, as the proper subject of the science of Being simply because it has no potential elements in whatsoever manner. This step, however, is not taken in the central books and is left for further reflections on this subject that are found in Book Λ. Nevertheless, I believe the fact that Aristotle's discussions fit and complement my previous claim that IS should be regarded as the core item in CDH of Being supports the view that the central books themselves can be regarded as a further step that systematically establishes the way for the final elucidation of the subject in Book Λ.

[21] One may observe this inclination in Book Z as well, where Aristotle states: 'Therefore if the form [τὸ εἶδος] is prior [πρότερον] to the matter [τῆς ὕλης] and more real [μᾶλλον ὄν], it will be prior to the compound also for the same reason.' (1029a5-7).

The nature of substance, according to this discussion, is reflected pre-eminently in what is in the state of actuality. This conclusion is in perfect harmony with what we have been told in Book E that the science of Being studies the separate and immovable substance. The conception that thereby stands out in Book E necessitates that IS, namely God, should be the primary object of inquiry of the science of Being. Aristotle's investigation into the priority of actuality over potentiality further confirms this. Since actuality is prior to potentiality in time, knowledge, definition and existence, and since the science of Being should deal with what is prior in the absolute sense, and again, since God should be regarded as the utmost prior object that can be found in the universe simply because He is absolutely actual in the sense that no potentiality is found in His nature, the science of Being should be dealing primarily with God. This last point, as we shall see, will only be established fully after the developments that will be achieved in Book Λ. Therefore, since every science deals with that which is primary, the science of Being will deal with the kind of Being that is ultimately prior,[22] which in turn, according to Aristotle's declarations in Book ϑ, is the actual Being.

Hence, if what has been said in the first chapter of Book Z is read in combination with the eighth and ninth chapters of Book ϑ, we come to understand what kind of substance is indeed prior to other Beings. Therefore, the discussions found in the central books with respect to priority of substance, if combined and read in context, give us certain clues with regard to which type of substance should be considered as the primary item in the CDH of Being. If there exists a substance which is in the state of pure actuality, then in the light of the discussions concerning the priority of act in Book ϑ, it follows at once that such a substance merits being called the first amongst others and therefore, should be regarded as the primary item of CDH of Being. This final step, which will determine whether

[22] 'But everywhere science deals chiefly [κυρίως] with that which is primary [τοῦ πρώτου], and on which other things depend [ἤρτηται], and in virtue of which they get their names [λέγονται].' (*Met.* Γ, 2, 1003b16-18).

there exists a purely actual substance, is left for Book Λ. This, however, does not present any obstacle to us concluding that the doctrine of priority of act results in a theological conception of the science of Being.

4.3. Being and Substance

We have already been informed in Book Γ that the science of Being investigates substance and this allows the study to be a universal inquiry into Being. My aim in this part is to show how Aristotle justifies the possibility of such a study of the several manifestations of Being through the study of substance by reducing[23] Being into substance in central books. Accordingly, I will first examine Aristotle's reduction of Being into substance. Having shown this reduction I will turn to another reduction, that is the reduction of substance into form. I will show that the criteria put forward in the central books for substance-hood, together with Aristotle's general conception of substance affirm that the main burden of a metaphysician is to study the pure form, namely, God. This, in turn, will prove that the conception of the science of Being in Aristotle's mind while he writes the central books is eminently theological and this conception is in line with the previously held conception of the science of Being that we encounter in Book Γ and Book E.

Aristotle's investigation of substance is crucial in the establishment of the science of Being for at least two interrelated reasons. First, he has already declared that substance stands at the nexus of the investigation of Being as it is prior to other manifestations of Being and the science of Being – like all the other sciences – should deal with what is most prior in the realm it investigates. Second, substance is the instance of Being, which is capable of reflecting the nature of Being in full. In

[23] Certainly, one might call this reduction an 'epistemological reduction' rather than an 'ontological reduction'. As I have mentioned for several times that Being in Aristotle has several manifestations and cannot be reduced to one.

the light of this background, against which the discussions in the central books took place, the need was felt to give a rational explanation and justification of substance, without which the construction of the science of Being and the overall picture of reality can hardly be attained.

4.3.1. Reduction of Being into Substance

In accord with his intentions to show that the study of Being can only be possible through the study of substance, Aristotle reduces Being into substance in the central books. This discussion proceeds against the backdrop presented in Book Γ. Recall that in Book Γ Aristotle established core-dependent homonymy (CDH) upon the priority of substance and that in Book E he has determined the subject-matter of the science of Being as separate and immovable substance. The science of Being, according to this line of thought, is primarily concerned with substance. The investigation of Being, as the preceding argument implies, consists of investigation into substance. Although Aristotle's previous discussions imply this as a fact, the doctrinal basis for such a view is not fully established. The investigation of substance in the central books provides the systematic basis for the reduction of the study of Being to the study of substance. Accordingly, in the first chapter of Book Z, one immediately witnesses the reduction of Being into substance:

> And indeed the question which, both now and of old, has always been raised, and always been the subject of doubt, viz. what being is [τί τὸ ὄν], is just the question, what is substance [τίς ἡ οὐσία]? For it is this that some assert to be one [ἓν], others more than one, and that some assert to be limited [πεπερασμένα] in number, others unlimited [ἄπειρα]. And so we also must consider chiefly [μάλιστα] and primarily [πρῶτον] and almost exclusively [μόνον] what that is which *is* in this sense.[24]

Against the background provided by Book Γ, Aristotle's assertion that the study of Being should primarily be a study of substance is not surprising. Since various manifestations of Being, namely, the categories, are understood with reference to

[24] *Met*. Z, 1, 1028b2-7.

substance, the primary task of the science of Being should be to examine substance. All the other manifestations of Being (i.e. categories) can be studied through the study of substance, which is ontologically, logically and causally prior to all the other non-substance categories.

Since the study of Being is reduced to the study of substance, we may expect that Aristotle will develop a detailed examination of substance in the course of the central books. Indeed, this expectation will be fulfilled to the letter. Aristotle's discussions on substance, if these discussions are to enlighten what substance is, should, therefore, initially introduce some criteria for substance-hood. These criteria, in turn, will be added to the previously held criteria emerging from Aristotle's ongoing discussion on the primary term in the CDH of Being in Book Γ and Book E.

4.3.2. Criteria for Substance-hood: Reduction of Substance into Form

Throughout the course of the central books, especially through the third chapter of Book Z, three major interconnected criteria can be observed for substance-hood, according to which Aristotle characterises substance as:[25]

1. a subject [ὑποκείμενον];
2. a this [τόδε τι];
3. separate [χωριστός].

One may wonder why my list of the characteristics of substance excludes 'universal' (καθόλου) and 'genus' although they are included in the characteristics

[25] The following sketch concerning the conditions of substance in central books does not do the issue justice. I will content myself, however, with presenting a very brief discussion of them in view of the fact that a full discussion of these criteria would exceed the natural limits of this essay. Although my presentation is necessarily brief and dogmatic, the interpretations I suggest are not idiosyncratic.

of substance in the third chapter of Book Z. I exclude these characteristics because Aristotle himself rules them out in the thirteenth and fourteenth chapters of Book Z. Aristotle does not investigate whether genus can be regarded as substance in the course of the central books. One may, however, admit that it is already ruled out from Aristotle's investigation of universal. Since genus is a universal, Aristotle does not need to commit a separate discussion of genus inquiring whether it merits to be regarded as substance. Universal, according to Aristotle's investigations, cannot be regarded as substance. Contrary to substance, which is ἑκάστου ἡ ἴδιος ἑκάστῳ, i.e. 'peculiar to an individual' and which 'does not belong to anything else' (οὐχ ὑπάρχει ἄλλῳ),[26] a universal is something that is shared by many things, i.e. common to many things.[27] A second reason why one should rule out universal as substance is stated plainly by Aristotle: 'Further, substance means that which is not predicable [λέγεται] of a subject [καθ' ὑποκειμένου], but the universal is predicable of some subject always [τὸ δὲ καθόλου καθ' ὑποκειμένου τινὸς λέγεται ἀεί]'.[28] Another reason is that universal acts as a quality (τὸ ποιὸν) of a subject and if we regard universal as substance then 'that which is not substance [μὴ οὐσία], i.e. quality [τὸ ποιὸν], will then be prior [πρότερον] to substance [οὐσία] and to the 'this' [τοῦ τόδε]'.[29] This is not acceptable 'for neither in formula [λόγῳ] nor in time [χρόνῳ] nor in coming to be [γενέσει] can the affections [τὰ πάθη] be prior to substance [τῆς οὐσίας εἶναι πρότερα]; for then they must be separable [χωριστά] from it'.[30] Aristotle gives further arguments[31] to support his thesis that universal cannot be regarded as substance. Underlying these reasons is the fact that universal does not satisfactorily meet the three characteristics I have listed for substance. The universal, for instance, is not 'separate' [χωριστός], which is a necessary requirement if something is to be called substance: 'Further, that which is one [τὸ ἓν] cannot be in many things at the same time [πολλαχῇ οὐκ ἂν εἴη ἅμα],

[26] *Met*. Z, 13, 1038b10
[27] *Met*. Z, 13, 1038b11. Cf. *Int*. 7, 17a39; *PA* I, 4, 644a27
[28] *Met*. Z, 13, 1038b15-16, cf. *Cat*. 5, 2a11; *Met*. Δ, 8, 1017b13
[29] *Met*. Z, 13, 1038b26-27
[30] *Met*. Z, 13, 1038b27-29
[31] See *Met*. Z, 13, 1039a 4ff. and Z, 14

but that which is common [κοινὸν] is present in [ὑπάρχει] many things at the same time; so that clearly no universal [οὐδὲν τῶν καθόλου] exists [ὑπάρχει] apart from the individuals [παρὰ τὰ καθ' ἕκαστα χωρίς]',[32] neither it is a 'this' (τόδε τι): 'no common predicate [τῶν κοινῇ κατηγορουμένων] indicates [σημαίνει] a 'this' [τόδε τι], but rather a 'such' [τοιόνδε]'.[33]

Although I have presented three characteristics as separate features of substance, they are not in actuality ultimately separate from each other. In his analysis in the third chapter of Book Z, Aristotle first introduces the first characteristic and finds it insufficient in reflecting fully what merits being called substance. Aristotle tellingly notes the simple reason for this as follows: 'The statement itself is obscure [ἄδηλον] and further, on this view, *matter* becomes substance [ἡ ὕλη οὐσία γίγνεται].'[34] The insufficiency of the criterion of subject-hood lies in the fact that it is obscure and it directly leads one to conclude that matter is substance. I have previously argued that what the argument found in central books tends towards is, however, the formal/actual substances. These merit being called genuine substances. Although Aristotle does not totally reject the substantial nature of matter,[35] his tendency throughout his investigation in central books is towards a formal nature. The simple reason is that matter itself leads the investigation into a blind alley whereas the form leads the analysis to what Aristotle calls 'actual substances' and therefore paves the way for the investigation to proceed towards the higher realities, the substances of heaven, and ultimately to God, who constitutes, as my argument suggests, the ultimate end of Aristotle's examination of substance and Being.[36]

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[32] *Met*. Z, 16, 1040b25-27

[33] *Met*. Z, 13, 1038b35-1039a2

[34] *Met*. Z, 3, 1029a9-10. This is followed by what scholars usually call 'the striptease argument' in which the substance is stripped [περιαιρουμένων] so as to pave the way for reaching the ultimate material nature at the bottom of all non-eternal sensible substances (NSS). For an excellent discussion of this argument see Mary Louise Gill, p. 19 ff.

[35] 'But clearly matter also is substance [ἐστὶν οὐσία καὶ ἡ ὕλη]; for in all the opposite changes [ἀντικειμέναις μεταβολαῖς] that occur there is something which underlies [ἐστί τι τὸ ὑποκείμενον] the changes…' *Met*. H, 1, 1042a32-34.

[36] Even in the beginning of his analysis of substance in the third chapter of Book Z, Aristotle limits his ultimate subject by virtue of excluding matter and composite from the realm of his

Aristotle's investigation of Being, in other words, can only find its way if the form, rather than the unintelligible matter that can only be known by an analogy,[37] is brought to the fore.

It is indeed true that matter cannot reflect the nature of substance in the absolute sense. In this way, also, matter can in no way be regarded as the primary term in core-dependent homonymy (CDH) of Being for the reason that matter is, by itself, unknowable, indeterminate and indefinable.[38] On the other hand, the conditions of substance, namely, 'thisness' and 'separation',[39] are reflected in form and it is by virtue of this latter element of substance that matter becomes a definite thing[40] and defined.[41] It is the formal element in substance that is fully intelligible. Neither can matter be regarded as ontologically prior, since it is the form that is responsible for the existence of matter.[42]

Since Aristotle's actual aim in the central books is to illuminate the nature of substance, he must, one way or another, reach the nature, in which 'substance-hood' is perfectly reflected.[43] We have already seen that form, rather than matter

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investigation: 'the substance compounded of both, i.e. of matter [τῆς ὕλης] and shape [τῆς μορφῆς], may be dismissed; for it is posterior [ὑστέρα] and its nature [πως] is obvious [φανερὰ]. And matter also is in a sense manifest. But we must inquire into the third kind of substance; for this is the most difficult [ἀπορωτάτη]' (1029a30-33). Many of the discussions in the central books are developed against the Platonic background and aim to determine whether forms can exist separately, as Plato suggests.

[37] *Phys*. I, 7, 191a7.

[38] Cf. *Met*. Z, 3, 1029a20ff.; 11, 1037a27.

[39] Matter always presents itself as endowed with form, hence, cannot be absolutely separate. See *Phys*. III, 5, 204b32. Cf. *GC* I, 5, 320b12ff.; II, 1, 329a8; 26.

[40] *Met*. Z, 1041b4-9.

[41] *Met*. Z, 10, 1035a7ff. Matter can only be known through the analogous reasoning defined in *Physics* (I, 7, 191a8-12).

[42] *Met*. Z, 1041b26; 28.

[43] The reason underlying the exclusive examination of NSS in the central books (although, as my argument suggests, Aristotle's aim is to reach the pure form) is given as: 'It is agreed [ὁμολογοῦνται] that there are some substances among sensible things, so that we must look first among these. For it is an advantage to advance to that which is more intelligible [εἰς τὸ γνωριμώτερον]. For learning proceeds for all in this way -through that which is less intelligible by nature [τῶν ἧττον γνωρίμων φύσει] to that which is more intelligible [τὰ γνώριμα μᾶλλον]…' (*Met*. Z, 3, 1029a33-1029b5). The following lines, I believe, strongly support my claim that the basic motive in the central books is to reach what merits being called substance in an ultimate sense: 'and

reflects the nature of substance in the absolute sense. That means, while Aristotle reduces Being into substance, his intention inclines towards a reduction of Being into form. I will now show that the two further criteria, namely, 'thisness' and 'separation' rule out matter to be regarded as a genuine substance. These two criteria (i.e. 'thisness' and 'separation'), as we shall see, lead the investigation to proceed towards the form. This, as I have mentioned, has implications for the science of Being and we shall see soon why this is so.

Aristotle has already stated in Book E that the subject of the science of Being should be what is separate and immovable.[44] The criterion of separation, therefore, is not unfamiliar to Aristotle's listeners or readers, but caution must be urged at this point. What Aristotle aimed at in Book E was to determine what kind of substance the metaphysician should precisely deal with. In Book Z, however, Aristotle's primary goal is to determine the nature of substance. Hence, even though the discussions in these two treatises relate to each other, the aims are separate and the inquiry is constituted on different levels. The level of analysis in the third chapter of Book Z is concerned mostly with differentiating substance from the so-called secondary categories, whereas in Book E the analysis is on a more specific level that inquires into which of the several types of substances are attributed for the interest of the metaphysician. For this reason, the criterion of separation put forward to distinguish the subject matter of the science of Being in Book E is associated with the criterion of immobility. In Book Z, however, we do

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just in conduct [ἐν ταῖς πράξεσι] our work is to start from what is good for each [ἑκάστῳ ἀγαθῶν] and make what is good in itself good for each [ἀγαθὰ ἑκάστῳ ἀγαθά], so it is our work to start from what is more intelligible to oneself [τῶν αὐτῷ γνωριμωτέρων] and make what is intelligible by nature intelligible to oneself [τὰ τῇ φύσει γνώριμα αὐτῷ γνώριμα]. Now what is intelligible and primary for particular sets of people is often intelligible to a very small extent, and has little or nothing of reality [τοῦ ὄντος]. But yet one must start from that which is barely [φαύλως] intelligible but intelligible to oneself, and try to understand [γνῶναι πειρατέον] what is intelligible in itself [τὰ ὅλως γνωστὰ], passing, as has been said, by way of those very things which one understands' (*Met*. Z, 3, 1029b5-12). See my discussion in the first chapter (pp. 19-21) on 'what is knowable by us' and 'what is knowable in nature', where I showed that the latter should be identified by ultimate substance, namely, the God.

[44] *Met*. E, 1, 1026a16.

not encounter such a direct association of separation with immovable substance; rather, on the level of analysis executed in Book Z, Aristotle seems to affirm that composites also, i.e. non-eternal sensible substances (NSS) and eternal sensible substances (ESS), are respected as separate substances.[45] The contrast, at this level, is made between the secondary categories, which cannot be regarded as separate for the fact that they owe their existence and their definition to substance, and that of substance, which is not dependent on anything else for its existence and for its intelligibility. The criterion of separation, therefore, is closely connected with self-sufficiency in the sense that a thing can be regarded as separate only if it can exist on its own and be known without the aid of anything else. The categories and the accidents, in this sense, are not separate, since they cannot exist and be known without an initial reference to substance. What merits being called substance, then, should be separate.

The analyses encountered in the entirety of the central books, however, are not constructed in a way that limits the usage of the criterion of separation for the above-mentioned purposes of the third chapter of Book Z. In the central books, Aristotle aims to determine the nature of substance by virtue of revealing and analysing the elements that constitute substances, namely, matter and form. The criterion of separation allows Aristotle to differentiate these two elements as well. Matter (and potentiality), accordingly, cannot be regarded as ultimately separate for it cannot be known beyond the form in which it manifests itself.[46] In other words, Aristotelian conception of matter and potentiality does not allow for pure matter and potentialities to be separate whereas these elements are always found and are known by their association with form. Contrary to form, therefore, matter is not self-sufficient and not separate.

[45] Cf. *Met*. Z, 3, 1029a29.
[46] See *Met*. Z, 10, 11, 1037a26; 17.

With regard to the discussion concerning what merits being called substance, the criterion of separation therefore implies that Aristotle definitely inclines towards identifying substance with form rather than matter. The criterion of separation, however, can be manifested best in the Supreme Being, which consists of pure form. There is no substratum needed to underlie the existence of such a Being. If, therefore, separation is a criterion of substance-hood, and if this implies that form merits being called substance rather than matter, then pure form, which has no matter in its existence, merits being called substance *par excellence*. Although this further step is not taken in the course of the central books, the discussions found in these books definitely pave the way for such an approach.

The impact of this investigation on the subject matter of the science of Being can be stated as thus: Since the science of Being must primarily study Being, it should study substance, for Being, as we have been told in the central books, is reduced to substance. Now, substancehood in the absolute sense can only be reflected in form rather than matter. For this reason the science of Being must primarily deal with form rather than matter. One may insist, at this point, that the main task of a metaphysician is to consider the forms of everything that exists rather than the pure form as my argument suggests. Aristotle indeed affirms that form can be taken separately and be known (and therefore be investigated) without any reference to matter as he admits that the forms of composites can be separated from the substratum in which they are manifested. Sensible substances, therefore, are 'complex of matter and form, which alone is generated and destroyed [γένεσις μόνου καὶ φθορά ἐστι], and is, without qualification [ἁπλῶς], capable of separate [χωριστὸν] existence'.[47] As I have shown in the previous chapter, however, the forms of composites cannot constitute the ultimate subject matter of the science of Being. These forms (i.e. the forms that manifest themselves in an underlying substratum- the forms of composites) are already attributed to the interest of physician: 'the student of nature is concerned only with things whose forms are

[47] *Met*. H, 1, 1042a30-31

separable [ἐστι χωριστὰ] indeed, but do not exist apart from matter [ἐν ὕλῃ]'.[48] In sensible things, Aristotle inclines towards an approach that does not allow a strict differentiation between matter and form. The matter, therefore, can be regarded as the form – potentially: 'But, as has been said, the proximate matter [ἡ ἐσχάτη ὕλη] and the form [ἡ μορφὴ] are one and the same thing [ταὐτὸ καὶ ἕν], the one potentially [δυνάμει], the other actually [τὸ δὲ ἐνεργείᾳ]'.[49] This shows how intimacy of form and matter in the composite sensibles. Hence, the forms of sensible substances are not entirely independent of matter. For this reason, the form of these sensible things cannot be studied in separation from matter, which amounts to saying that such substances cannot be the subject of the science of Being, which studies what is absolutely separate. This can be nothing other than the pure form, namely, God.[50] The discussion of separation as a criterion of substance-hood in the central books therefore shows that the main burden of a metaphysician must be pure form, namely, God.

Separation, however, is not the only criterion for substance-hood; there is also the criterion of 'thisness'. The usage of this term in the Aristotelian corpus shows that it mostly designates the form that is separated from matter.[51] This criterion requires that substance, if it is to be called a 'this' (τόδε τι), should be definite. In the text of the third chapter of Book Z, Aristotle aims to employ this term in order to show that the substance-hood can be reflected better in form than in matter. The criterion of 'thisness' serves this goal in the fullest sense for the reason that it requires definiteness, since we know from a number of passages that one of the major characteristics of matter is that it is indefinite.[52] Hence, according to the

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[48] *Phys*. II, 2, 194b12ff.
[49] *Met*. H, 6, 1045b18-19
[50] Michael Frede tellingly notes: 'the forms of sensible substances are not pure actualities; they in part are constituted by unrealized possibilities and in that sense are not fully real. The form that is the unmoved mover, on the other hand, is pure actuality' (Frede, 1987, p. 90).
[51] See *De An*. II, 1, 412a8-9; *Met*. Δ, 8, 1017b25; H, 1, 1042a29; Θ, 7, 1049a35, where Aristotle explicitly identifies a 'this' (τόδε τι) with shape and form. See, however, *Met*. Z, 11, 1037a1-2, where a 'this' is contrasted with pure form. Cf. *Met*. Λ, 3, 1070a11-12.
[52] See, for instance, *Phys*. III, 6, 207a25; *Met*. Z, 10, 1036a8; 11, 1037a27.

condition of 'thisness', the substance should be identified with form rather than matter or, at least, matter itself is not fully capable of reflecting substance-hood because of its indefinite nature.

Hence, the conditions of substance, enumerated in the third chapter of Book Z, are not independent of each other.[53] Together, these criteria, namely, separation and thisness, show that substance-hood is reflected best in form, rather than in matter.

What do all these discussions say about the subject matter of the science of Being? What can be derived from these discussions in terms of the basic task of a metaphysician? First and most significantly, they imply that, instead of matter, the form constitutes the point of interest for the metaphysician, because they show that the nature of substance is best reflected in form. Since all sciences should deal with what is prior and what reflects best the nature that they seek to investigate, the science of Being should primarily focus on formal substance, as in such a substance the nature of substance-hood is manifested in the fullest sense.

The cumulative result of the developments encountered in the central books, then, will be as follows: Book Γ has already established the fact that the science of Being should deal with what is:

1. ontologically prior,
2. logically prior, and
3. causally prior.

[53] The fact that these conditions are presented separately in Book Δ (8, 1017b23-25) does not show that they are not in fact closely interconnected. They are taken as closely connected conditions in H, 1, 1042a26-31, where subject-hood is explained in terms of separation and thisness.

These considerations have proved that substance should be the primary focus of attention in the science of Being. Book E articulated this substance by presenting two further criteria according to which the science of Being should deal with

4. separate, and,
5. immovable substance.

Having determined what kind of substance is to be dealt with by the science of Being, Book Z takes up the investigation and, by virtue of articulating the features of substance (i.e. 'subject-hood', 'thisness' and 'separation'), illuminates the subject matter of the science of Being, according to which the investigation concerning Being should deal with

6. concrete substances with
7. formal/actual nature(s) (as opposed to material natures).

This metaphysical outlook is further supported by Book Θ, which establishes the absolute priority of form and actuality over matter and potentiality. The inclination, as we have seen, is towards pure actuality, which should be regarded as prior in every way to all the other types of substances as well as the other so-called secondary categories.

The discussion concerning the conditions of substance in the central books therefore shows that form merits being called a substance rather than matter. Since the basic subject matter of a metaphysician is substance, normally one would expect her/him to study the thing in which substance-hood is best reflected. The discussion with respect to conditions of substance shows that the form alone can best reflect the nature of substance. The less a substance is endowed with matter, the more its nature reflects substance-hood. If there exists a substance, then, which does not contain any material part at all and which consists of pure actuality, this

will reflect substance-hood best in its nature. Such a substance, therefore, will constitute the basic interest of the one who inquires into the nature of substance. Indeed, such a substance exists in the Aristotelian doctrine of Being, namely, God, who stands at the top of the hierarchy of Being and is immobile and eternal, constituting a perfect unity in His nature without any material/potential parts. The conception of substance that we encounter in the course of the central books therefore supports the theological conception of the science of Being by virtue of showing that the form, which is eternal, unchangeable and ungenerated, is always prior to matter, and reflects the nature of substance better than matter.

Aristotle's investigation of substance-hood in the central books, therefore, shows us that the pure form should be regarded as the ultimate subject matter of the science of Being. The conception, therefore, is eminently theological and is perfectly in line with the previously held conceptions of the science of Being we encounter in Book Γ and Book E.

4.4. Essence and Substance

I have previously stated that the focus of Aristotle's investigations in the central books is his inquiry into essence. One of his goals is to avert the problems with respect to definitions of composites originating from his peculiar theory of Being, which he establishes by the hylomorphic analysis of substance. Many of the discussions in the central books are *aporematic* and often it is extremely difficult to picture what the full appearance of the doctrine might look like. As regards the final details of the doctrine that appears in these texts, the confession of ignorance seems to be the only safe policy. Hence, while staying in safe limits as much as Aristotle's discussions on essence and substance allow, my aim is to examine these texts in order to extract as much evidence as I can with respect to the major subject matter of the science of Being.

What I shall do in this section is to examine in general terms what has been stated in the course of the central books with respect to essence and substance and try to decide on some issues concerning the subject matter of the science of Being that have not been settled in previous discussions of the present text.

Recall that I stated while I was discussing Book Γ and the peculiar structure it uses as the basis for the science of Being, namely, core-dependent homonymy (CDH), that the primary term of CDH should be prior to the peripheral terms in a number of ways if such a structure is to function properly. One of these priorities was logical priority, which requires that the primary term should definitionally be prior to the peripheral terms in the sense that the latter should be defined by a necessary reference to the former. Hence, the possibility of constructing a valid definition for the primary term is extremely significant in establishing the CDH by virtue of which the unity of the science of Being is established. I have also shown that another priority required for the construction of CDH is that the central term must be prior in knowledge to the other peripheral instances. This, as I have shown, is closely linked to logical priority as well, simply because in Aristotle's conception of knowledge a thing is known primarily by the definition to which it appertains. Hence, if logical priority fails, then priority of knowledge will also be endangered. In such a case, it would no longer be possible for CDH to be established and the overall unity of the science of Being would be endangered. The discussions with respect to essences and definitions of substances in the central books are quite significant, since if they fail to show the possibility of the central term in CDH of Being being defined, then all the structure that has been established for the unity of the science of Being will break down.

My analysis of CDH has proven that the most suitable candidate for standing as the central term in CDH of Being was Immobile Substance (IS). Unfortunately, none of the discussion in the course of the central books addresses directly the possibility of constructing a valid definition for such a substance; instead, these

discussions are limited to the possible definitions of sensible composites (whether non-eternal sensible substances (NSS) or eternal sensible substances (ESS)). This, however, does not impede at least an indirect investigation of the possibility of constructing a definition for IS. What I shall do, accordingly, is examine Aristotle's discussions on the definitions of sensible composites and try to extract results for IS.

4.4.1. Elements of Definition

One of the main concerns of Aristotle in the course of his discussions of essence is to determine the elements that should be included in the essence of things. One of his fundamental aims is therefore to determine the precise scope of essence (τὸ τί ἦν εἶναι). Aristotle first excludes what is accidental (συμβεβηκός) from the realm of essence. The essence, according to this line of thought, should reflect what is *per se* (καθ' αὐτό), i.e. necessary, rather than what is accidental. Aristotle's method of excluding the accidental from the realm of essential Being is notoriously terse:

> The essence [τὸ τί ἦν εἶναι] of each thing is what it is said to be in virtue of itself [καθ' αὐτό]. For being you is not being musical; for you are not musical in virtue of yourself [οὐ γὰρ κατὰ σαυτὸν εἶ μουσικός]. What, then, you are in virtue of yourself [κατὰ σαυτόν] is your essence.[54]

What Aristotle is getting at in this passage is the identification of essence with *per se* attributes of things. Since one can by definition contrast *per se* attributes with accidental attributes,[55] and since essence should reflect the *per se* attributes of a thing, accidental attributes should be excluded from the realm of essence. In other

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[54] *Met*. Z, 4, 1029b13-16.

[55] This, however, is not as simple as it may seem in the first instance, as, in *Topics*, Aristotle explicitly distinguishes two types of accidentals and calls one of those accidentals τὰ καθ᾽ αὐτὰ συμβεβηκότα, that is, 'in itself accidental' (I, 22, 83b18). In other passages, Aristotle uses accidental combined with *per se* as well (for such uses, see, for instance, *An. Post*. I, 7, 75b1; 83b22; *Top.* II, 3, 110b22; *Phys.* II, 2, 193b27; III, 4, 203b33; *PA* I, 3, 643a27; *Met.* B, 1, 995b20,25; 2, 997a20, 21, Δ, 30, 1025a30). Now, one may be tempted to ask whether it is appropriate to combine accidental and necessary when these terms can well be contrasted with each other. The combination seems contradictory in the first instance. Richard Tierney, in his 'On the Senses of "*Symbebekos*" in Aristotle' suggested an excellent solution to this problem, in which he argues that 'in itself accidental' refers to one of the senses of what is necessary.

words, unless the attributes of a thing do not pertain to that thing by virtue of itself (in which case these attributes should be regarded as accidental), they cannot be involved in the essence of that thing. This, however, requires a further investigation of *per se* attributes of things: should all of the attributes of a thing that are said to be *per se* be included in the essence of things? Aristotle's answer is in the negative.[56] According to what we are told in Book Z, not every sense of *per se* is to be included in the essence of things.[57]

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[56] *Met*. Z, 4, 1029b17.

[57] At this point one should consult the Aristotelian corpus in order to understand exactly which of the *per se* attributes should be included in the essence of things. Aristotle exclusively examined *per se* attributes in *Posterior Analytics*, I, 4 and in *Metaphysics*, Δ, 18. According to these investigations, the term *per se* is πολλαχῶς λεγόμενον, that is, 'said in many ways'. Two of these senses are significant for an understanding of Aristotle's discussion of essence. I will accordingly call these two senses *per se*-1 and *per se*-2. Aristotle describes *per se*-1 as follows: 'One thing belongs to another in itself [καθ' αὐτὰ] both if it belongs to it in what it is [ἐν τῷ τί ἐστιν]- e.g. line to triangle and point to line (for their substance [οὐσία] depends on these and they belong in the account [ἐν τῷ λόγῳ] which says what they are [τί ἐστιν])' (*An. Post*. I, 4, 73a34). These attributes, according to Book Δ, should be included in the definitions of things: therefore 'in virtue of itself' [καθ' αὐτὸ] must have several meanings [πολλαχῶς ἀνάγκη λέγεσθαι]. It applies to (...) whatever is present in the 'what' [τί ἐστιν], e.g. Callias is in virtue of himself an animal [ζῷον ὁ Καλλίας καθ' αὐτόν]. For 'animal' is present in the formula [ἐν τῷ λόγῳ] that defines him; Callias is a particular animal [ζῷον γάρ τι ὁ Καλλίας]' (*Met*. Δ, 18, 1022a25). *Per se*-1 attributes of a thing are inseparable from that thing and they pertain to the very nature of the thing in question. They, therefore, should be included in the definition of the thing in question. The genus and the differentia, according to this line of thought, should be regarded as *per se*-1 attributes. These attributes are the basic constituents of the definition of a subject. On the other hand, *per se*-2 attributes are not to be involved in the essence of things. Aristotle describes this sense of *per se* thus: 'If the things it belongs to themselves belong in the account which makes clear what it is [ἐν τῷ λόγῳ τῷ λέγοντι τί ἐστιν ἐνυπάρχει]- e.g. straight belongs to the line and so does curved, and odd and even to number, and prime and composite, and equilateral and oblong: and for all these there belongs in the account which says what they are [ἐν τῷλόγῳ τῷ τί ἐστι λέγοντι] in the one case line, and in the others number' (*An. Post*. I, 4, 73a36-73b3). In *per se*-2 one should focus on the definition of the attribute connected to the subject rather than the definition of the subject. In this case, the necessary reference to the subject makes it possible for the attributes to be defined. In other words, the attribute is no longer involved in the description of the subject; rather, the subject itself is involved in the definition of the attribute. Hence, a *per se*-2 attribute of a subject can only be defined by the subject it belongs to. 'Straight and curved' are *per se*-2 attributes of 'line' since their definition necessarily involves the utterance of 'line' (see *De An*. I, 1, 402b20). The most frequent example given by Aristotle to illustrate this sense of *per se* is a triangle whose interior angles are equal to two right angles (some of the passages in which one can find this example are: *Top.* II, 3, 110b22; *De An.* I, 1, 402b20; *PA* I, 3, 643a30; *Met*. Δ, 30, 1025a30). Some of the other examples describing such *per se* attributes are follows: in *Topics* (I, 5, 102a20) Aristotle states that 'capable of learning grammar [τὸ γραμματικῆς εἶναι δεκτικόν]' is a *per se*-2 attribute of man; according to a passage from *On Sleep* (2, 455a13) every sense has some *per se*-2 attributes such as 'seeing' and the 'sense of sight' and 'hearing' and the 'auditory sense': in *Parts of Animals*, I, 1, 639a29 'flying', 'swimming', 'creeping' are given as *per se*-2 attributes of an 'animal'; similarly, in the same work, II, 16, 658b35, Aristotle states that it is a *per se*-2 attribute of an elephant to use its nose as a hand; in *Metaphysics* (M, 3, 1078a5) Aristotle uses 'maleness or femaleness' as *per*

Having stated that accidents and some of the *per se* attributes of a subject are not to be involved in the definition, Aristotle proceeds to investigate whether it is possible to construct definitions of things that are constituted from a substance and a secondary category.[58] He gives the example of 'white man' (λευκὸς ἄνθρωπος) in order to illustrate the things that are constituted of substance and a secondary category. He anticipates an objection to the construction of the definitions of such substances. 'White' is an accident and *qua* accident it should be excluded from the realm of essence. Aristotle meets this objection by stating that there is no problem in constructing the definitions of such substances unless a quality like 'white' is inappropriately connected to the subject. Even though he affirms that it is possible to construct definitions for such things, however, these definitions should not be regarded as genuine definitions.[59] The genuine definitions should be of the primary category *only* rather than of combinations of substances with secondary categories.[60] Essence, therefore, pertains to the primary category[61] rather than to

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se-2 attributes of an 'animal'. These examples illustrate that it is possible to observe a counter predication [ἀντικατηγορεῖται] between *per se*-2 attributes and the subject to which they pertain. Although the only possibility of defining 'maleness and femaleness' is by the reference they make to their proper subject 'animal', it is impossible to conceive an animal that is neither male nor female. With this counter predication found in between *per se*-2 attributes and the subjects they belong to, one can identify *per se*-2 with the term 'property' (ἴδιον), which is described in *Topics* as follows: 'A property [ἴδιον] is something which does not indicate the essence of a thing [τὸ τί ἦν εἶναι], but yet belongs to [ὑπάρχει] that thing alone [μόνῳ], and is predicated convertively [ἀντικατηγορεῖται] of it. Thus it is a property of man to be capable of learning grammar [τὸ γραμματικῆς εἶναι δεκτικόν], and if he is capable of learning grammar, he is a man. For no one calls anything a property which may possibly belong to something else [ἄλλῳ ὑπάρχειν], e.g. sleep in the case of man, even though at a certain time it may happen to belong to him alone' (*Top*. I, 5, 102a18-24). Properties of a subject signify the peculiar attributes to which that subject pertains. These, therefore, can be contrasted with 'common' [κοινός] attributes that can be shared by many subjects (for some of the passages where Aristotle explicitly uses property as opposed to 'common,' see: *Phys*. III, 1, 200b24; *De An*. II, 3, 414b24; *SS* 1, 436a4; *OS* 2, 455a13; *OD* 1, 458b6; *HA* IV, 8, 532b32; *EN* III, 11, 1118b9; *Pol*. III, 4, 1276b24; *Econ*. II, 1, 1345b18). These properties (*per se*-2 attributes) are not involved in the essence of things. *Per se*-1 and *per se*-2 attributes play a crucial role in Aristotle's conception of science. They constitute the subject of scientific demonstration (cf. *An. Post*. I, 6, 75a29).

[58] *Met*. Z, 4, 1029b23-1030a27.

[59] *Met*. Z, 4, 1030a2.

[60] The secondary categories themselves are definable 'by addition' (ἐκ προσθέσεως, *Met*. Z, 5, 1031a1). Aristotle explains what he means by the phrase 'by addition' thus: 'When I say "by

the so-called secondary categories.[62] We shall shortly see in close detail the way in which the definitions should be of substance only.

Let us roughly sum up what has been affirmed with respect to essence up to this point. Aristotle's discussions have confirmed that the essence is genuinely reflected in the first category, namely, the substance. He additionally affirms that there are definitions of things that are composed of substance and a secondary category, although these should not be regarded as genuine definitions.

Besides these possibilities, there are the things that are composed of a subject and a *per se* quality. This Aristotle investigates in the fifth chapter of Book Z. Such are the composite natures (συνδεδυασμένων) as opposed to simple (ἁπλῶς) natures; 'snub nose' (ἡ σιμότης) is a perfect example of such natures, where concavity (ἡ κοιλότης) is said to be a *per se* attribute of a nose (ῥὶς). Such natures are extremely significant for physics, for Aristotle has already declared in Book E that physics deals with forms that are not separable from matter.[63] If the definitions of such composite natures cannot be constructed, the science of physics will be endangered altogether. Similarly to what he affirms for the things that are combined from substance and a secondary category, Aristotle declares that the composite natures such as snub nose have definitions; however, these definitions will not be genuine but rather they are secondary definitions. Aristotle encapsulates his discussion at the end of chapter five:

> Therefore in one sense nothing will have a definition [ὁρισμὸς] and nothing will have an essence [τὸ τί ἦν εἶναι], except substances [πλὴν ταῖς οὐσίαις], but in another sense other things will have them [ᾠδὶ δ' ἔσται]. Clearly, then, definition is the formula of essence [ὁ ὁρισμὸς ὁ τοῦ τί ἦν εἶναι λόγος], and essence [τὸ τί ἦν

addition" I mean the expressions in which we have to say the same thing twice, as in these instances' (*Met*. Z, 5, 1031a4-5).

[61] Cf. *Top*. I, 9, 103b27-39; *Met*. Z, 1, 1028b1.

[62] This explains Aristotle's identical usage of essence with substance in some of the passages (see, for example, *Met*. A, 8, 989b12; H, 1, 1045b32).

[63] *Met*. E, 1, 1025b34.

> εἶναι] must belong to substances either alone [μόνων] or chiefly [ἢ μάλιστα] and primarily [πρώτως] and in the unqualified sense [ἁπλῶς].[64]

Essence and definition belong chiefly to substances and secondarily to combinations of substances with either accidental (e.g. white man) or *per se* attributes (e.g. snub nose).

4.4.2. Essence and Existence

Having shown which items have proper definitions, Aristotle proceeds to argue against the Platonic theory of ideas by virtue of employing his conception of essence and Being in the sixth chapter of Book Z. His aim in this part is to demonstrate the superfluity of postulating separate ideas as the basic constituents of Being. Aristotle supports his position by showing the inseparability of essence and Being. If we differentiate essence from Being and postulate separate essences as in the theory of ideas, we will end up with two impossible results:[65] (a) in such a structure, since essence is differentiated from Being and since these two are postulated as separate realms, even though we know the essence we would no longer know Being. In such a case, our overall knowledge with respect to sensible substances will diminish simply because the knowledge of their essence would not lead to the knowledge of their Beings;[66] (b) if we were to differentiate essences from Beings, the essences of ideas would not be Beings. If the essence were to be differentiated from Being (if, in other words, the essence of Being were not to exist) the essences of things that are separate from ideas would not exist as well. By virtue of these unacceptable results, Aristotle shows the impossibility of differentiating essences from Beings. Only by affirming the absolute identity of

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[64] *Met*. Z, 5, 1031a10-15.

[65] My exposition of Aristotle's affirmation that the essence and existence should be one and the same *per se* is necessarily brief and dogmatic. The present aim is simply to provide a general background for the discussion about the definability of God, which will be examined in a moment.

[66] It is worth noting that this will not cause a genuine problem with respect to Plato's doctrine of Being and knowledge *qua* itself, as he has already lowered the ontological and epistemological status of sensible things as far as possible.

essence and Being will the scientific knowledge of things – that depend fundamentally on the definitions of things – become possible:

> Each thing then and its essence [ἕκαστον καὶ τὸ τί ἦν εἶναι] are one and the same [ἓν καὶ ταὐτὸ] in no merely accidental way [οὐ κατὰ συμβεβηκὸς], as is evident both from the preceding arguments and because to *know* each thing [τὸ ἐπίστασθαι ἕκαστον] at least is to know its essence [τὸ τί ἦν εἶναι ἐπίστασθαι] so that even by the exhibition [κατὰ τὴν ἔκθεσιν] of instances it becomes clear that both must be one [ἕν].[67]

Essence cannot be predicated of the thing in an accidental way (κατὰ συμβεβηκὸς); rather, the relation between a thing and its essence is a *per se* (καθ' αὐτό) type. This result can be linked with Aristotle's previous discussion of whether it is possible to construct definitions of composites that are constituted of an accident and a subject. In such composite structures, the Being and the essence do not completely overlap,[68] for which reason it is not possible to postulate the genuine definitions of such structures. In other words, in such composite structures the essence would not reflect the Being in the absolute sense; correspondingly, the definition would not be the definition of Being in an unqualified sense (ἁπλῶς).[69]

The problems I have enumerated so far do not cover all the puzzles that can be postulated with respect to the discussion of essence. There is the further problem of the unity of the thing that is defined, which is thoroughly discussed in the twelfth chapter of Book Z and the sixth chapter of Book H. Aristotle states this problem thus:

> I mean this problem: wherein consists the unity [ἕν] of that, the formula [τὸν λόγον] of which we call a definition [ὁρισμὸν], as for instance in the case of man, two-footed animal; for let this be the formula of man. Why, then, is this one [ἕν], and not many [οὐ πολλά], viz. animal *and* two-footed [ζῷον καὶ δίπουν]?[70]

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[67] *Met*. Z, 6, 1031b18-22.
[68] *Met*. Z, 6, 1031b22ff.
[69] By virtue of this discussion, Aristotle additionally meets some of the sophistical objections that are mostly based on a fundamental confusion between the accidental and the substantial. See *Met*. Z, 6, 1032a6.
[70] *Met*. Z, 12, 1037b10-14.

Aristotle simply asks how it is possible that a definition composed of a genus and a differentia constitutes a unity rather than a mere combination of genus and differentia. Why, in other words, do two-footed (δίπουν-differentia) and animal (ζῷον-genus) constitute a unity? Aristotle has a powerful answer to this problem, in which he correlates genus with matter and final differentia[71] with form.[72] The relation between genus and differentia, therefore, is correlated with the relation between matter and form. Just as the proximate matter is potentially what the form is actually, the genus is potentially what the differentia actually is.[73] Finally, the status of differentia, in accordance with Aristotle's general doctrine of actuality, is higher than the genus: 'If then this is so, clearly the last differentia [ἡ τελευταία διαφορὰ] will be the substance [ἡ οὐσία] of the thing and its definition [ὁ ὁρισμός]…'.[74]

It is significant in this discussion that the things that have no matter, according to Aristotle's declarations, constitute absolute unities. The problem of the unity of the thing defined, therefore, is not applicable to such things as have no matter: 'And all things which have *no* matter [μὴ ἔχει ὕλην] are *without qualification* [ἁπλῶς] essentially unities [ἕν].'[75] Things such as the categories of Being other than substance, the mathematical objects and God can be enumerated as the ones that have no matter.[76] Such things, therefore, are perfect unities and the problem of the unity of the thing defined is not applicable to them.

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[71] Caution must be urged here inasmuch as only the final differentia merits being called the substance and essence of the thing in question: 'If then a differentia of a differentia be taken at each step [διαφορᾶς διαφορὰ γίγνηται], one differentia, the last [ἡ τελευταία], will be the form [τὸ εἶδος] and the substance [ἡ οὐσία]…' (*Met*. Z, 12, 1038a25-26). The final differentia covers the other differentiae that may be employed while one is constructing a definition of a thing. Therefore, there is no need to repeat the other differentiae in the definition.

[72] *Met*. Z, 12, 1038a5; 1038a25. Cf. *An. Post*. II, 13, 96b12; *Met*. H, 6, 1045a35

[73] For the proximate matter and the form are one and the same thing, one potentially and the other actually. Cf. *Met*. H, 6, 1045a22-33; 1045b17.

[74] *Met*. Z, 12, 1038a18-20.

[75] *Met*. H, 6, 1045b23.

[76] Cf. *Met*. H, 6, 1045a36.

4.4.3. Essence and God

If one were to refine these problems, one would immediately notice that all of them emerge from Aristotle's hylomorphic analysis of sensible substances. In other words, the problems of essence are encountered because the sensible object has matter. Matter has nothing in itself to provide the determination and knowability of the sensible thing in question.[77] Matter, in other words, is absolutely undetermined (ἀόριστος) and unknowable (ἄγνωστος).[78] Since all sensible things contain matter in their nature,[79] when one attempts to define them one inevitably involves matter in the expression of the thing in question.[80] When matter is involved in the definition, however, as we have seen, the definition can no longer be regarded as a genuine one. This is because matter is not definite, nor 'a this', and therefore it undermines the definition in question.

From the perspective of form, however, the problems with respect to essence vanish. Contrary to matter, form is determinate and completely knowable. Hence, the definition, if it is to be a genuine one, must express the form rather than the matter. This is reflected to a degree in Aristotle's peculiar technical language as well. The differences between secondary definitions that involve the expression of matter are basically referred to by the term τί ἐστιν, whereas the genuine definitions that are constructed solely upon the form are called τὸ τί ἦν εἶναι.[81] The latter, therefore, is correlated solely with form, excluding all the possible accidental

[77] *Phys*. III, 6, 207a25; *Met*. Z, 10, 1036a8-9.
[78] 'But matter is unknowable [ἄγνωστος] in itself [καθ' αὐτήν]' (*Met*. Z, 10, 1036a8-9). Matter in this respect resembles accidentals; neither is definite, i.e. determined: 'And it is only right that the "of" something locution [τὸ ἐκείνινον λέγεσθαι] should be used with reference both to the matter and to the accidents [κατὰ τὴν ὕλην καὶ τὰ πάθη]; for both are indeterminates [ἀόριστα]' *Met*. ϑ, 7, 1049a36-1049b2.
[79] *Met*. Z, 8, 1033b17-19; cf. *Phys*. I, 7, 190b22-23.
[80] *Met*. Z, 7, 1033a1-5; 8, 1033b24-26.
[81] This, however, should not be taken as a strict rule. In many of the passages, these terms are used identically. See, for instance, *An. Post*. II, 6, 92a7; 7, 92b29; *Top*. VII, 3, 153a15; *Met*. Z, 4, 1030a29, b5.

elements[82] as well as matter and for this reason reflects the genuine definitions as opposed to the former that refer to definitions expressing the formal *as well as* the material nature of the thing defined.[83] Hence, τὸ τί ἦν εἶναι more strictly signifies the particular nature[84] of a thing by solely addressing its form whereas τί ἐστιν refers to the sum of *all* elements that may be involved in describing that thing. The essence, therefore, should be identified with form, which Aristotle frequently does,[85] since the definition, if it is to be genuine, should be of form; only in this way will it reflect the unchangeable, consistent and eternal nature of the thing in question. As we have seen, however, this is not entirely possible in the case of sensible substances, since in such substances form is realised in some particular matter.[86] Though this is the case, Aristotle affirms that form can be defined without reference to matter.[87] In such cases, however, the essence will not reflect the thing *in the absolute sense* because there will be elements in the nature of the thing defined that are not covered by the definition of the thing in question, namely, the material parts that are excluded from the realm of essence. That is exactly the reason that underlies Aristotle's rejection of the possibility of the definitions of concrete sensible things:

> But when we come to the concrete thing [συνόλου], e.g. *this* circle [κύκλου τουδὶ], i.e. one of the individual [καθ' ἕκαστά] circles, whether sensible [αἰσθητοῦ] or intelligible [νοητοῦ] (I mean by intelligible circles the mathematical, and by sensible circles those of bronze and of wood), of these there is no definition [οὐκ ἔστιν ὁρισμός], but they are known by the aid of thought or perception [μετὰ νοήσεως ἢ αἰσθήσεως]; and when they go out [ἀπελθόντες] of our actual consciousness [ἐκ τῆς ἐντελεχείας] it is not clear whether they exist or not [εἰσὶν ἢ

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[82] 'The essence [τὸ τί ἦν εἶναι] of each thing is what it is said to be in virtue of itself [καθ' αὐτό]. For being you is not being musical; for you are not musical in virtue of yourself [οὐ γὰρ κατὰ σαυτὸν εἶ μουσικός]. What, then, you are in virtue of yourself is your essence' *Met*. Z, 4, 1029b13-16.

[83] For the passages where τὸ τί ἦν εἶναι, i.e. the essence, refers to form (εἶδος), see *Phys*. II, 2, 194a21; *Cael*. I, 9, 278a3; *GC* II, 9, 335b35; *De An*. II, 1, 412a20; *Met*. Z, 4, 1029b27; 7, 1032b2 ff.; 10, 1035b16 ff.; H, 3, 1043b1; Λ, 8, 1074a35. This is supported in the passages where Aristotle discusses four causes as well; in these passages τὸ τί ἦν εἶναι is always correlated with the formal cause: *Met*. A, 3, 983a27; 7, 988a34; Δ, 2, 1013a27; b22; Z, 17, 1041a28; H, 4, 1044b1.

[84] i.e. the essence in the proper sense; this is confirmed most clearly in *Met*. Δ, 18, 1022a26; cf. also *MA* 8, 708a12; *Met*. Z, 4, 1029b13ff.; 11, 1037a33; 13, 1038b14.

[85] See *Met*. Z, 7, 1032b1-2; 1032b13-14; 10, 1035b14-16; 1035b32; 11, 1037a28-b4; H, 4, 1044a36.

[86] *Met*. Z, 10, 1035a4-5; 11, 1036b3-4; 1036a31-32.

[87] *Met*. Z, 11, 1036a26-b7.

> οὐκ εἰσίν]; but they are always stated [λέγονται] and cognised [γνωρίζονται] by means of the universal formula [τῷ καθόλου λόγῳ].[88]

Such concrete individuals are known through their form, which is capable of reflecting the universal essence (τῷ καθόλου λόγῳ). The definitions of concrete sensible things that are composed of matter and form is not possible; only by virtue of form can they be defined.[89]

Since, therefore, the concrete sensible substance, such as this table, involves matter in its nature, it cannot be definable in the absolute sense. Matter, on the other hand, affects the nature of a sensible thing in a necessary way. Matter is the principle of change; the things that have matter correspondingly are subject to generation and corruption. It is this that underlies the unintelligibility of such objects. Matter is subject to change, undermining any attempt to construct definitions in the absolute sense.[90] The contingent nature of matter undermines our construction of proper definitions of sensible individuals. All scientific knowledge, on the other hand, depends on necessary and universal truths. These are alien to the nature of matter,

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[88] *Met*. Z, 10, 1036a2-8.

[89] '…we have stated that in the formula of the substance [ἐν μὲν τῷ τῆς οὐσίας λόγῳ] the material parts [τὰ οὕτω μόρια ὡς ὕλη] will not be present [οὐκ ἐνέσται] (for they are not even parts of substance [μόρια τῆς οὐσίας] in that sense, but of the concrete substance [τῆς συνόλου]; but of this there is in a sense formula, in a sense there is not [ταύτης δέ γ' ἔστι πως λόγος καὶ οὐκ ἔστιν]; for there is no formula of it with its matter [μετὰ μὲν γὰρ τῆς ὕλης], for this is indefinite [ἀόριστον], but there is formula of it with reference to its primary substance [κατὰ τὴν πρώτην δ' οὐσίαν]- e.g. in the case of man the formula of the soul [ὁ τῆς ψυχῆς λόγος]-, for the substance is the indwelling form [ἡ γὰρ οὐσία ἐστὶ τὸ εἶδος τὸ ἐνόν], from which along with the matter the so-called concrete substance is derived [λέγεται οὐσία]; e.g. concavity [ἡ κοιλότης] is a form of this sort, for from this and the nose [τῆς ῥινὸς] arise snub nose [σιμὴ ῥὶς] and snubness [ἡ σιμότης]; ['nose' will be found to be involved twice [δὶς] in these terms] [Excised by Ross]; but in the concrete substance [ἐν δὲ τῇ συνόλῳ οὐσίᾳ], e.g. a snub nose or Callias, the matter also will be present [ἐνέσται καὶ ἡ ὕλη]' (*Met*. Z, 11, 1037a24-33).

[90] Aristotle neatly encapsulates this fact as follows: 'For this reason, also, there is neither definition nor demonstration [οὔτε ὁρισμὸς οὔτε ἀπόδειξις] of sensible individual substances [τῶν οὐσιῶν τῶν αἰσθητῶν τῶν καθ' ἕκαστα], because they have matter [ἔχουσιν ὕλην] whose nature is such that they are capable both of being and of not being [καὶ εἶναι καὶ μή]; for which reason all the individual instances of them are destructible [φθαρτὰ]. If then demonstration is of necessary truths [τῶν ἀναγκαίων] and definition involves knowledge [ἐπιστημονικόν], and if, just as knowledge [ἐπιστήμην] cannot be sometimes knowledge and sometimes ignorance, but the state which varies thus is opinion, so too demonstration and definition cannot vary thus, but it is opinion [δόξα] that deals with that which can be otherwise than as it is; clearly there can neither be definition [ὁρισμὸς] nor demonstration [ἀπόδειξις] of sensible individuals' (*Met*. Z, 15, 1039b27-1040a2).

which is regarded as contingent.[91] It is opinion, rather than truth, to which the knowledge of matter leads. Only form can satisfy the requirements of necessity and universality of scientific knowledge, since such knowledge depends on definitions of things, which in turn are linked primarily and necessarily to form.[92]

This discussion concerning the possibility of constructing definitions of individual concrete sensible substances has shown sufficiently that such substances are not definable in the absolute sense. Their nature cannot be covered fully by their essences, simply because matter cannot be reflected in the definition. Although a definition can be constructed for them, this cannot be regarded as a genuine definition simply because it will involve matter whose contingent nature undermines the requirements of essence. Now, when one looks at discussion in the central books that show it is not possible to construct genuine definitions for sensible substances and compares them with the discussion in Book Γ with respect to core-dependent homonymy (CDH), the obvious result is that such substances cannot be regarded as the proper candidates for standing as the primary terms in CDH of Being. Since these substances cannot be defined in the absolute sense, they cannot be regarded as logically prior, which is one of the necessary requirements of CDH, revealed in Book Γ in order to construct the universal science of Being. If, therefore, such substances are not logically prior, they cannot be regarded as the primary terms in the CDH of Being. This confirms my argument that non-eternal sensible substances (NSS) and eternal sensible substances (ESS) cannot be regarded as proper candidates to be the ultimate subjects of the science of Being.[93] The

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[91] See *An. Post*. I, 8, where Aristotle shows that there can be no demonstration of the perishable things because of their contingent nature.

[92] The issue is not as simple as reflected in this discussion; however, this is sufficient for my purpose in this part, which aims solely to derive conclusions with respect to the definability of God.

[93] One may be tempted to ask whether ESS are to be regarded as indefinable objects on the basis of the different nature of the matter to which these substances pertain. Aristotle answers: 'As has been said, then, people do not realise that it is impossible to define [ἀδύνατον ὁρίσασθαι] in the case of eternal things [ἐν τοῖς ἀϊδίοις], especially those which are unique [μοναχά], like the sun or the moon. For they err not only by adding [προστιθέναι] attributes after whose removal [ἀφαιρουμένων] the sun would still exist, e.g. "going round the earth" or "night-hidden" (for from their view it follows that if it stands still or visible, it will no longer be the sun; but it is strange if

requirements of logical dependence, therefore, cannot be fulfilled by concrete sensible substances. We should therefore look for a candidate other than concrete sensible substances that can fulfil the requirements of CDH. Before this, however, I will now emphasise another outcome of the examination made so far with respect to the essence of concrete sensible substances, which brings us to the point of my discussion.

All these discussions with respect to the essence of individual concrete substances tell us quite clearly that the definition of a sensible individual cannot completely overlap with what it is as a whole, since the definition of their Being, if it is to be a genuine one, must address their form *only*, excluding the material part that, nevertheless, is one of the two genuine constituent elements of such substances. This amounts to saying that with respect to individual sensible substances τί ἐστιν and τὸ τί ἦν εἶναι do not entirely overlap, simply because the essence reflected by their formal nature does not cover the overall 'whatness' of such substances, which includes the material *as well as* the formal constituents of their nature. It is for exactly this reason that these substances can only be known from the perspective of their forms, which covers all that can be expressed about them rather than all that they *are*. The material constituents of sensible individuals undermine the possibility of absolute knowledge of such substances. This shows that besides their insufficiency in fulfilling the requirements of logical dependency, such sensible individuals cannot be regarded as prior in knowledge as well. This doubly confirms that such substances cannot be regarded as the primary elements in the CDH of Being, which requires that the primary element should absolutely be prior in knowledge.

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this is so; for "the sun" means a certain *substance* [ὁ γὰρ ἥλιος οὐσίαν τινὰ σημαίνει]); but also by the mention of attributes which can belong to another subject; e.g. if another thing with the stated attributes comes into existence, clearly it will be a sun; the formula therefore is general [κοινὸς ἄρα ὁ λόγος]. But the sun was supposed to be an individual [ἀλλ' ἦν τῶν καθ' ἕκαστα ὁ ἥλιος], like Cleon or Socrates' (*Met*. Z, 15, 1040a27-1040b3).

In the previous parts of this chapter, I have argued that the general tendency that one can encounter throughout the central books of *Metaphysics* is towards separate substance, whose nature consists of a pure form. I believe the discussions so far with respect to the essences of sensible individuals confirms this, since the doctrine that emerges from these discussions leads to an expectation that there should at least be some substances for which we can construct genuine definitions. Such substances, as the argument necessitates, should consist of pure form, in which matter has no role in undermining the construction of a genuine definition for them. These will thereby be fully intelligible as the essence and the existence will entirely overlap in their nature. Indeed, Aristotle explicitly addresses this question: 'But in the case of so-called self-subsistent things [τῶν καθ' αὐτὰ λεγομένων], is a thing necessarily the same as its essence [ἆρ' ἀνάγκη ταὐτὸ εἶναι]?'[94] His general doctrine necessitates that he gives a positive answer to this question, because in 'self-subsistent things' whose nature consists solely of form and which are absolutely separate from matter the τί ἐστιν and τὸ τί ἦν εἶναι will overlap. This Aristotle explicitly confirms at the end of the sixth chapter of Book Z: 'Clearly, then, each primary [τῶν πρώτων] and self-subsistent [καθ' αὐτὰ] thing is one and the same as its essence.'[95] This, however, is not the case with sensible substances, whose nature is composed of matter and form.

Aristotle's discussion of essence has so far shown that NSS and ESS are not proper candidates for CDH because it is impossible to construct genuine definitions for such substances. But we know that there is a third kind of substance, namely, God, whose nature consists purely of form. I have previously implied that this substance is the best candidate for standing as the primary term in CDH of Being. Do the discussions so far about essence confirm this thesis?

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[94] *Met*. Z, 6, 1031a28-29.
[95] *Met*. Z, 1032a4.

Almost all of the questions raised so far address sensible composite substances to which Aristotle applies his hylomorphic analysis. Hylomorphic analysis, however, yields some inevitable results with respect to the essence and existence of sensible substances. Since Aristotle insists on identifying essence with form, the Being of the sensible composites does not completely overlap with their essence, which in turn removes the possibility of constructing genuine definitions of such substances. Furthermore, hylomorphic analysis requires additional explanations with respect to the unity of sensible substances. Sufficient justification must be provided for the possibility of the unity of the twofold nature of these substances.

On the other hand, if we can postulate a substance whose nature consists of pure form, will the problems raised in the central books remain as challenging as they are for sensible composites? The answer should certainly be in the negative. Such a substance will reflect in its nature an absolute unity; a unity that needs no further demonstration. There will be no matter involved in the nature of such substances that can undermine any attempt to construct a definition. That definition will reflect all that *is* and all that can be expressed concerning that substance simultaneously since there will be no difference between the Being and the essence of such substance. This substance will be eternal and unchanging; what this substance *is*, therefore, is all that it is *per se*. Hence, it will be possible to construct a genuine definition of such substance.

The third type of substance that I have regarded as the best candidate for standing as the primary term in CDH, namely God, perfectly suits this description, because He is absolutely necessary and has no material parts that can undermine His definition and His unity. From what has been said with respect to essence and Being in the central books, one can infer that God is fully definable and thereby absolutely intelligible. This amounts to saying that among the other candidates (i.e. ESS and NSS) only God merits being regarded as logically prior in the absolute sense. For this reason also, He is absolutely prior in knowledge.

In the fifteenth chapter of Book Z, Aristotle has sufficiently shown the impossibility of constructing genuine definitions of individuals. Now, one may be tempted to doubt that God is definable, because He is an individual. This doubt, however, is not justifiable, since an individual is not indefinable *qua* individual, but in so far as it has matter that is contingent in nature. If this contingency can be averted, there will be no obstacle to defining an individual. As a matter of fact, what happens in the case of God is exactly this, since God has no matter and thus no contingent parts. The fact that He consists of pure form implies that His is an absolutely *per se* Being, whose nature is fully sufficient in establishing the basis for a possible definition despite the fact that He is an individual.

Although the central books do not investigate God on behalf of Himself, they sufficiently establish the step for that examination. They construct the doctrinal basis for further inquiry into the nature of God by virtue of preliminary examination of the sensible composites that are more knowable by us. The arguments found in these books proceed towards the separate self-subsistent substance, which is knowable in nature, namely God, who, as the arguments found in these books suggest, is perfectly definable and intelligible.[96]

[96] Aristotle himself seems to recognize this plan that constitutes a gradual examination of Being starting from the sensible substance, which is more knowable by us, and proceeding towards separate substance, whose nature consists of form and which is knowable in nature: 'Regarding these matters, then, we must inquire which of the common statements are right and which are not right, and what things are substances, and whether there are or are not any besides sensible substances [παρὰ τὰς αἰσθητὰς], and how sensible substances exist, and whether there is separable substance [χωριστὴ οὐσία] (and if so why and how) or there is no substance separable from sensible substances [παρὰ τὰς αἰσθητάς]; and we must first sketch [ὑποτυπωσαμένοις] the nature of [τί ἐστιν] substance' (*Met*. Z, 2, 1028b27-32). Aristotle surely recognises the eternal substances in the central books, although he does not undertake a discussion of them: 'Yet even if we had not seen the stars, nonetheless, I suppose [οἶμαι], would there be eternal substances [οὐσίαι ἀΐδιοι] besides those which we knew [παρ' ἃς ἡμεῖς ᾔδειμεν]; so that now also if we do not know what eternal substances there are, yet it is doubtless necessary that some should exist [ἀλλ' εἶναί γέ τινας ἴσως ἀναγκαῖον]' (*Met*. Z, 16, 1040b34-1041a3).

Hence, inquiries found in the central books should be regarded as an integral part of the doctrine that proceeds gradually in the several treatises of *Metaphysics*. The discussions found in these books sometimes support, as in the case of their investigation of several manifestations of Being, whereas in other cases they articulate and develop (in their discussions with respect to priorities of substance and priority of actuality over potentiality) the ongoing discussions originated in the previous treatises of *Metaphysics*. Most significant of all, however, is the discussion of essence found in these books, showing that only formal substance can fulfil the requirements of logical priority in full, which has not yet been proved in the previous treatises of *Metaphysics* and which is one of the necessary conditions of CDH established in Book Γ to construct the basis of the universal science of Being. Seen in this perspective, despite the fact that these books concern themselves mostly with composite substances, they fully support the theological conception of the science of Being. The inquiries found in these books support the view that only separate, self-subsistent formal substance can fulfil the requirements of CDH by virtue of indirect means, leaving aside the examination of the nature of such a substance for another treatise. The three central books, therefore, support the view that the science of Being should be a theological ontology, which concerns itself primarily with the self-subsistent, formal substance, namely, the God.

CHAPTER V

5.1. Introduction

Perhaps more than any other treatise of *Metaphysics* it is Book Λ that has give rise to the most controversies among scholars down the ages. Most significantly, Aristotle's examination of God as the ultimate principle of the Universe, who is characterized as self-thinking thought and as pure form, deeply nourished late classical, Arab and medieval philosophy. Modern scholarship gradually added new disputes to the ongoing debates with respect to Book Λ. My fundamental purpose in this part is to determine the exact role played by Book Λ in Aristotle's doctrine of the science of Being, which he developed through the treatises of *Metaphysics*. Hence I will not go into the details of every possible dispute that has emerged from Aristotle's enterprise in Book Λ; rather, I am content to deal with matters that have immediate impact on what I aim to support in this part of my thesis.

Modern scholars have debated whether Book Λ is an early work of Aristotle. Jaeger suggested that Book Λ must be accepted as an early work fundamentally because of its theological standpoint. Since, according to Jaeger, this theological standpoint is a sign of Platonism, it is probable that Book Λ was an early work of Aristotle, when he was still under the influence of Plato.[1] Certainly, such reflection tends to equate what is theological with what is Platonic. Aristotle, as defended by Jaeger, abandons this theological standpoint in further stages of his philosophical development as he moves away from Platonism.

One may not wish to subscribe to this view so readily, however. Employing the criteria espoused by Jaeger, namely, Platonism and the theological appearance of Book Λ, it is not a given that Book Λ is an early work. Admittedly, the

[1] Jaeger states: 'Joining all these observations together, we may say that Book Λ represents the stage that we have discovered to come before the traditional metaphysics, a stage that was still purely Platonic and did not recognize the doctrine of sensible substance as an integral part of first philosophy' (1962, p. 221). See the critiques of H. von Arnim, Nuyens and Oggioni against Jaeger's views in Owens (1951), pp. 95-104 and in Reale (1980) pp. 312-320.

doctrine that we encounter in Book Λ may seem to be somewhat sketchy and undeveloped, for which reason it can indeed be regarded as an early work of Aristotle. One might also be inclined to reject this argument by claiming, alternatively, that Book Λ was written somewhat hastily by Aristotle, which is the reason for its sketchy character, at the later stages of his philosophical development in order to close a certain lacuna in his doctrine of the science of Being, namely, the doctrine of God, which had not been examined in previous treatises of his *Metaphysics*.[2]

I believe that, on the basis of the limited evidence we have, it is almost impossible to decide conclusively whether Book Λ *must* be regarded as an early work of Aristotle or else a treatise written in the mature stages of Aristotle's philosophical development. I do not think, however, that this has any immediate adverse effect on our examination of Book Λ, for I think it is the harmony of the doctrine that we encounter in Book Λ with the other treatises of *Metaphysics*, rather than some speculative disputes on the chronology of the text of Book Λ, that, as it were, must be the focus of our attention. It seems upon reflection, then, that the importance of Jaeger's claim is that he espouses a view that grounds itself on the idea that the doctrine with respect to the science of Being we encounter in Book Λ is incompatible with the general outlook of the science of Being that we encounter in other treatises of *Metaphysics*, especially in Book Γ. In this chapter, I will challenge this view and show that not only is there close harmony between Book Λ and other treatises of *Metaphysics* – and for that matter Book Γ–, but also that they can be regarded as complementary parts of the same doctrine. To this end, I will not only present an assessment of a possible reconciliation between the grounding structure of the science of Being introduced in Book Γ, namely, core-dependent homonymy (CDH) and what Aristotle has been claiming in Book Λ with respect to the science of Being and, for that matter, in terms of Immobile Substance (IS), namely the God, but also I will attempt to show that Book Λ is a necessary part of the whole doctrine of the science of Being.

[2] Cf. Frede (2000), pp. 48ff. for the details of such a claim.

5.2. The Scope of Book Λ

Commentators have long been puzzled with respect to the scope of Book Λ. At the outset, it is possible to observe two standpoints with respect to this puzzle; on the one hand, Book Λ may be claimed to be Aristotle's only systematic essay on theology and focuses solely on God; on the other hand, it can be regarded as a general treatise on substance. Aristotle's dominant concern in Book Λ, according to the former view, would be to set down the elements of his theology. The proponents of this approach include Ross[3] and, more recently, Graham.[4] On the other hand, Lang[5] and Frede[6] have challenged this view and attempted to show that assuming Book Λ to be just a theological treatise is misleading and that it should be regarded as a general treatise on substance.

For a possible decision on this puzzle, one needs to clarify what it means for a treatise to be theological. On the first view, being theological seems to rule out Book Λ being a general treatise on substance. It is important to appreciate at the outset that this suggestion, as it stands, is utterly misleading, as it hardly explains Aristotle's investigations on sensible substances in the first six chapters of Book Λ. Furthermore, from the very beginning of Book Λ one has the feeling that Aristotle's discussion will be about substance as he differentiates three types of substances and begins his investigation from non-eternal sensible substances (NSS).[7] Certainly, to say that Book Λ is primarily concerned with substance does not amount to saying that it excludes a theological conception of the science of Being from the discussion. It is indeed possible, on the other hand, to affirm that Book Λ reflects Aristotle's enterprise in establishing his theology, albeit with an interpretative reservation, which would sufficiently show the necessary connections between the study of all substances as far as

[3] Ross (I, 1924), p. CXXX.
[4] Graham (1987), p. 266.
[5] Lang (1993), p. 258.
[6] Frede (2000), p. 5.
[7] For more on the possible adverse outcomes of considering Book Λ as a treatise that concerns itself solely with God, see Helen Lang (1993), p. 268, 274-275.

they are Beings through the study of IS in the scheme provided in Book Γ. It is this point that is missing in the first interpretation, for what this approach claims rules out Aristotle's general examination of substance in Book Λ. Being a treatise on God, therefore, does not impede Book Λ's being a treatise on other substances if one is to take into consideration the general core-dependent homonymous structure of Being.

Perhaps the proponents of the second interpretation that supports Book Λ's being a general treatise on substance would also subscribe to my view that Book Λ's being theological does not impede its being at the same time a general treatise on substance. However, I do not still think that this approach comes to grips with what is really going on in Book Λ. On Frede's view, for instance, Book Λ, in its enterprise to enlighten the nature of IS, presents a study of a general 'kind' of substance, which is not strictly and necessarily focused on a first Unmoved Mover:

> The phrase 'of this kind' should warn us that the characterization of the first unmoved mover given so far might not be specific to the first unmoved mover, but characterize any unmoved mover, any mover which is supposed to account for the eternal circular motion of any object.[8]

Again Frede states:

> (…) this second main part of Λ is not primarily about God, but about the separate unchanging substances which turn out to be the unmoved movers.[9]

It seems, then, according to Frede, given that the enterprise in Book Λ focuses on a general kind of substance, God's role in this treatise seems not to be necessary. I think that this stance is misleading, however. What Aristotle needed was to clarify the characteristics of God in the way he has done in Book Λ if his conception of the science of Being that is based upon the structure provided in Book Γ is to operate accurately. The description of God in Book Λ, as I shall show in this chapter, fits exactly the properties Aristotle called for to place God at the core of the CDH of Being, whereby the inquiry into God, i.e.

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[8] Frede (2000), p. 36.
[9] *Ibid*. p. 37.

theology, can become a universal study of Beings as far as they are Beings. It is not, I think, a 'kind of substance' but specifically the God, with its attributes, that makes CDH work accurately. One of the aims of this chapter, therefore, is to support this claim by way of going through the attributes of God and testing them against the requirements of CDH explained hitherto. Thus, I claim that Aristotle's main concern in Book Λ is not limited to God but rather spreads through all types of substances. The underlying structure that supposedly justifies Aristotle's enterprise, as I claim, is provided by CDH.

5.3. Book Λ and *Metaphysics*

Recall that in Book A Aristotle has sufficiently emphasized that Wisdom, which is the correlate of the science of Being, should be regarded as a divine science since it deals with the highest principles and causes. In Book Γ, Aristotle has established the grounds for a universal science of Being through the study of a core item, namely, 'substance'. Nevertheless, although he gives some clues, he does not articulate which type of substance is most suitable for fulfilling the role of core item in the CDH of Being. Thereafter Book E took up the investigation and determined the ambiguously stated 'substance' of Book Γ, which was espoused as the 'first' among things, which should be regarded as God. The central books articulately investigated the sensible substances, thereby establishing grounds for the study of the 'first' substance.

Now, what might be the role played by Book Λ, if any, among these treatises? Should we affirm that it is a separate treatise having no effect on the ongoing discussion with respect to the science of Being as if it were an appendix, or should we affirm that it is a necessary part of the whole? If the latter is the case, what exactly is the role of Book Λ in the treatises of *Metaphysics*?

Among scholars, it seems that the orthodox view is to regard Book Λ as a separate treatise. Bonitz observed in his *Commentary* that Book Λ is in no way

connected with the other treatises of *Metaphysics*.[10] Jaeger states that 'the style and the choice of ideas show that it is an isolated lecture'.[11] Ross, similarly, claimed that Book Λ 'presents all the appearances of a separate work'.[12] Owens[13] and Leszl[14] also reflected similar thoughts.

More recently, Frede has reflected on this subject as he notes:

> Λ originally seems to have constituted a treatise of its own which only later was inserted into *Metaphysics*. Suppose that, due to some accident, the whole of *Metaphysics* except for book Λ had been lost at a very early stage of its transmission, and that only Λ had survived, but under the title *On Substance*. We would have no reason to think that Λ was just a fragment, or only a chapter of a book, of an originally much larger work, which, but for this part, unfortunately had been lost. For Λ, for instance, does not refer to earlier or to later sections of a larger work which it presents itself as only a part of. It, both in form and in content, is a self-contained work. Suppose, instead, that Λ, due to some accident at a very early stage, had been separated from the *Metaphysics*, and that it and the rest of the *Metaphysics* had been transmitted separately, the former again under the title *On Substance*. In this event we would have two treatises traditionally attributed to Aristotle, a *Metaphysics* and an *On Substance*. Even with this *Metaphysics* available to us, we would have little reason to suppose that the treatise we had come to call *On Substance* originally was a book of the *Metaphysics*. One would not be able to identify a clear gap or lacuna in this *Metaphysics*, either in form or in content, such that Λ precisely fitted into this gap.[15]

Frede, like the other scholars I have cited, thinks that Book Λ is a self-contained work. He most certainly states that we do not have good reasons to connect it with the other treatises of *Metaphysics*. In expounding his thoughts he seems to have two possibilities in mind, to which I will shortly add a third. Let me begin with the first possibility that Frede has in mind. According to this possibility, we have only Book Λ and not the rest of *Metaphysics*. Under such circumstances, do we still have good reasons to think that it is a part of a larger work such as *Metaphysics*?

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[10] 'Deinde libro Λ de integro, quasi nihildum disputatum sit, orditur philosophus quarere de summis principiis, et ea quidem pertractare, quae quum ad concludendam universam doctrinam praecipue sint necessaria, tamen reliqua cum disputatione nullo modo connectuntur' (Bonitz (1849), p. 9).
[11] Jaeger (1962), p. 219.
[12] Ross (1924), I, p. xxviii. Ross stated that 'Λ must be considered an entirely independent treatise, with one principal aim, that of establishing the existence of an eternal unmoved mover of the world' (p. xxix).
[13] Owens (1951), p. 90.
[14] Leszl (1975), p.493.
[15] Frede (2000), p.1.

One might observe, at the outset, that *Metaphysics*, as we have it today, seems not to be designed and written as a single treatise by Aristotle, instead, one might rightfully conjecture that this work is composed of several treatises all of which address more or less similar issues about the nature of reality. Some of the treatises (e.g. Z, H, ϑ) seem to be more closely related while others (e.g. Book Δ) seem to be more independent. However that may be, despite the fact that these treatises appear to have some level of independency, we can still affirm that all of them are clustered around similar problems and Book Λ is not an exception in this regard. As with the others, it has certain independence, and it looks as if one might take it as a complete literary text. Despite the fact that it can indeed be regarded as a complete literary text, can we also simply affirm that it reflects a complete philosophical doctrine? In other words, can we say that Book Λ is complete without the rest of *Metaphysics* in terms of its doctrinal positions? What might be missing, in case we do not have the rest of *Metaphysics*, in the doctrine that we encounter in Book Λ?

The scale of Aristotle's enterprise in Book Λ is the whole Universe. It is true that in this treatise Aristotle presents an account of the nature of substance. Differently from the account he has given in the central books, in which his enterprise is concerned more with sensible substances, the scale of Aristotle's examination of substances in Book Λ covers all of the substances in the Universe. The treatise, in this way, has a holistic approach to the Universe. One of the objectives of this chapter is to justify that Aristotle most explicitly envisages some kind of an order (τάξις)[16] in this holistic outlook. Now, that strongly emphasized order, I believe, could not be established and justified to the full if we did not have the framework presented in Book Γ, namely, CDH.

In the course of Book Λ, we are most explicitly told that all things in the Universe are ordered together to one end.[17] I maintain that this order can only

[16] I will discuss this subject in detail in 5.5.1.
[17] *Met.* Λ, 10, 1075a19.

be justified by virtue of the CDH, details of which are given in Book Γ. Although Aristotle does not make explicit the details of such a relation whereby we attain an order in the Universe, his argument relies upon the relations found between the instances of Being, which is explained in Book Γ. Perhaps one might subscribe to the view that Aristotle wrote Book Λ before he sharpened up his theory of CDH, that is before Book Γ. In such a case, Book Γ justifies the positions maintained by Aristotle in Book Λ by virtue of supplying the underlying structure of the order that Aristotle has explained in Λ. Alternatively, one might claim that Book Λ was written after Book Γ with some confidence that this order is already justified so that there is no need to go into the details of the underlying structure, i.e., the CDH of Being, once more in Book Λ. Any conclusive pronouncement on this matter seems to be almost impossible. Whatever it may be it still looks as if Book Λ depends on CDH, without which it cannot show the unity and order of the Universe in the way one might expect. Although it places a strong emphasis on the unity and the order of the Universe, it does not, as it were, make explicit the details of how in actuality such an order might be attained. The *kata hen* relation, as we have observed in the previous chapters of this thesis, is not capable of supplying sufficient grounds to unify Being in the manner Aristotle would like, that is, as the manner in which it paves the way for a unified science of Being, for, as mentioned, *kata hen* requires Being to be regarded as a genus. This, as we have seen, would most certainly be rejected by Aristotle. Hence, the order that is emphasized in Book Λ, upon which the science of Being is supposed to be established, can only be found by way of CDH and, in this way, Book Λ depends on the doctrine that is developed in Book Γ. It seems, then, that what Aristotle maintains in Book Λ needs an explicit treatment of CDH within the system of Being, without which Book Λ would be incomplete. In this way, therefore, if we had Book Λ without the rest of *Metaphysics*, we would think that it requires a kind of treatment that we face in the treatises of *Metaphysics*, especially in Book Γ. Hence, although one might take Λ as a complete literary text, it will still not be philosophically complete without what is provided in Book Γ, namely, the CDH of Being.

On the second possibility that Frede has in mind, that is, if we had both Book Λ and *Metaphysics*, if they had been transmitted separately, we might ask whether we would have good reasons to suppose that Book Λ was still a book of the *Metaphysics*. I maintain that there is a sense in which we can accept that the treatises of *Metaphysics*, as they come down to us, are separate treatises more or less concerned with same kind of questions. Thus we may readily agree that Book Λ is not part of the same book, however, we may still insist, for good reasons, that the treatises of *Metaphysics*, and for that matter Book Λ, reflect parts of the same doctrine, that is, they are parts of the same philosophy. So the sense in which Book Λ belongs in the *Metaphysics* is the sense in which it is a treatise along with several treatises of *Metaphysics* all more or less inquiring into the same subject, namely the problem of Being, and with the same positions. Therefore, the question of Being belonging to the *Metaphysics* is not a matter of it belonging to the single literary whole; rather, belonging to the *Metaphysics* must be, in a way, to be philosophically integral part of the system reflected in the *Metaphysics* as a whole. Hence, whilst we may abandon our claims of literary inclusiveness for *Metaphysics*, we may still claim a kind of philosophical inclusiveness of Book Λ to the *Metaphysics*. So, then, the question is whether there would be any reason to put Book Λ along with the other treatises of *Metaphysics*. The answer to this question, I think, is in the affirmative, for what Book Λ is concerned with is exactly the same doctrine with which the other treatises of *Metaphysics* are concerned. Hence, as much as the other treatises of *Metaphysics* belong to the *opus* of *Metaphysics*, so Book Λ may be involved in the *Metaphysics* as well.

One might, however, consider another possibility, a fairly obvious one, which is not considered by Frede, and which can be stated thus: suppose we have the rest of *Metaphysics* and we do not have Book Λ. In such circumstances, would *Metaphysics* then seem to be incomplete? My answer, for which I argue in what follows in this chapter, is that in such circumstances the doctrine of the science of Being that we encounter throughout the treatises of *Metaphysics* would be

incomplete if we did not have Book Λ. Hence, I think Book Λ fills an important gap in the doctrine of the science of Being, without which we would not have an operating system of Being that can pave the way for a unified universal study of things that *are*. This claim, however, depends upon a particular reading of the *Metaphysics*, especially of Book Γ, in the way I suggest.

We have already seen that Book Γ presented a science of Being that studies what it is for things to be, namely the Being qua Being, and formulates the underlying structure for such a science while it establishes CDH. This amounts to saying that only in the structure provided by the CDH of Being can the science of Being operate. This structure, as we have seen, necessitates a core item that is absolutely prior in several ways. This is also supported by Book E, where the study of the highest substance, namely God, is attributed to the science of Being. Now, in Book Λ, we encounter the division of substances into three types and, in accordance with the general doctrine arising from Book Γ and Book E, the first two types of these substances, namely NSS and ESS, are attributed to physics, whereas the third type, which is the highest amongst these types of substances, namely IS, is stated as the proper subject of the science of Being.[18] In the later stages of Book Λ, one eventually finds an investigation of the nature of the IS, that is, God, and thereby meets a plain requirement that naturally derives from the previous discussion of the science of Being as it presents God, namely the most suitable candidate for standing as the CDH of Being.

Now, this amounts to saying that Book Λ fills an important gap that must be filled if we are to have a complete doctrine of the science of Being. As we have seen, in order that the CDH of Being can operate properly one must be able to articulate a substance that is absolutely prior to the other Beings. If this was not possible, then the science of Being would not reach the required universality by excluding some substances that are not connected to the primary instance,

[18] 'The former two kinds of substance are the subject of natural science [φυσικῆς] (for they imply movement); but the third kind belongs to another science…' (*Met*. Λ, 1, 1069a36-b1).

namely the core item, in a *pros hen* way. The investigation of this absolutely prior substance, however, would be missing if we did not have Book Λ, especially the second part, that is, chapters six to ten. Hence, by virtue of introducing and to some extent articulating what Book Γ has envisaged as the core item in the CDH of Being, Book Λ fills an important gap in the doctrine, without which the investigation of the science of Being could not be completed.

We might, then, reasonably conclude that since none of the treatises of *Metaphysics* other than Book Λ inquires into the highest substance, namely, God, we would not have a complete picture of the science of Being without the treatment found in this treatise simply because, in such a case, we would not have the 'core' item in the CDH of Being, that is the 'first substance', which can rightly be regarded as the basic subject matter of the science of Being through which the investigation turns out to be a study of all things as far as they are Beings.

In order to justify what I have claimed so far, I need to move beyond this general discussion of the role of Book Λ in the treatises of *Metaphysics* to examine the arguments that we encounter in this treatise. To this end, in the next section, I will first inquire into whether we can find traces of CDH in Book Λ, which will allow me to demonstrate better the connections between Book Λ and the other treatises of *Metaphysics*, especially Book Γ. Later, I will examine the characteristics of God stated in Book Λ and attempt to determine whether these characteristics are capable of supporting what I claim with respect to God's role in the CDH of Being.

5.4. Book Λ and the CDH of Being

I have already claimed that Book Λ fills an important gap in the doctrine of the science of Being. I claim that the way in which Book Λ fills this gap is through supplying the most necessary element of the CDH of Being, that is the core element. This, I claim, can be observed in Aristotle's enterprise in Book Λ to set

out the characteristics of God. Now, it would be rather annoying for proponents of such a view if no traces of the doctrine of CDH were to be found in Book Λ. If, after all, we cannot find traces of CDH in Book Λ, how can we legitimately argue that Aristotle's enterprise in this treatise so explicitly fills a gap in the doctrine of CDH of Being, accept by accident? The basic question is, then: Can we find traces of the CDH of Being that is explained in Book Γ in Book Λ? This question has received significant attention from scholars. The proponents of the idea that Book Λ is a separate treatise quite naturally tend to deny the existence of CDH in Book Λ, for this would certainly open a lacuna in their argument in that it would show a clear connection between Book Λ and the other treatises of *Metaphysics*, especially Book Γ. One of the proponents of this view, as I have mentioned, is Michael Frede who denies the existence of CDH in Book Λ. Frede states:

> A fortiori there is no indication that he [Aristotle] conceives of his enterprise as an attempt to set out what can be said about beings quite generally, about beings in so far as they are beings. What is conspicuously missing from Λ is a doctrine concerning the systematic ambiguity of the term 'being', let alone the conception of focal meaning which would allow Aristotle to give a unified account of substancehood or of being as such. Λ, in comparison to Γ, E, or Z, H, Θ seems to be remarkably vague in its conception of the metaphysical enterprise. It fits the enterprise envisaged by A, but it does not seem to go much beyond A in its conception of this enterprise. On balance it seems to me to reflect a less developed approach to metaphysics than either E or Z, H, and Θ.[19]

According to this conception, Book Λ neither recognizes the approach to the science of Being that is marked by the term 'Being qua Being', nor involves the doctrine of CDH. Book Λ is a premature outline of the doctrine of Being. It does not include Aristotle's more developed account of the science of Being, such as the CDH in Book Γ.

It can indeed be argued that the doctrine of the CDH of Being in its most mature appearance does not exist in Book Λ. I have already stated that the reason for this might be that Book Λ is an early work. However that may be, it seems unacceptable for me to subscribe to the view that there is no recognition

[19] Frede (2000), p. 50.

of CDH in Book Λ. I think, on the contrary, that not only is there a close harmony between Aristotle's enterprise in Book Λ and Book Γ but also that Aristotle clearly recognizes the CDH of Being in Book Λ even though he does not make it explicit in the way he does in Book Γ. It is not clear that CDH is explicitly mentioned in Book Λ but this does not stop it is being true that it is recognized in Book Λ and that Aristotle's enterprise in this treatise fills a gap in the doctrine of the science of Being. In what follows, I will attempt to go through the traces of the CDH of Being in Book Λ in order to show that Aristotle recognized it at the time he wrote Book Λ.

5.4.1. Ontological Dependence: Inter-Categorical Relations in Book Λ

We have already seen in regard to Book Γ that there are inter-categorical and intra-categorical levels in the CDH of Being and that these can only be worked out to produce the universal science of Being by investigating a primary core item, that is, the highest substance. Ontological dependence, as we have seen in the previous chapters of this thesis, works in both of these levels whereby we attain a unified science of Being through the CDH of Being. Now, if Frede is right, we may expect to find no traces of the recognition of such a dependence relation in both levels in Book Λ. After all, to say that CDH does not exist in Book Λ may well amount to saying that its constituents are not recognized and traced in Aristotle's enterprise in Book Λ. If, on the other hand, we can find traces of the constituents of CDH in Book Λ, we may argue that they indeed serve for a certain doctrine – the doctrine that is explicated in Book Γ – without which, in turn, one might not make sense of their existence in Book Λ.

At the first level, an inter-categorical dependence between substance and secondary categories can be observed. Can we find traces of such a dependence whereby one can affirm that Aristotle recognizes them in Book Λ? I believe we can indeed find some evidence towards this avenue of approach, for instance, in the first chapter of Book Λ, where Aristotle discusses the priority of substance over the other categories:

> [A] Substance is the subject of our inquiry [ἡ θεωρία]; for the principles [αἱ ἀρχαὶ] and the causes [τὰ αἴτια] we are seeking [ζητοῦνται] are those of substances [τῶν γὰρ οὐσιῶν]. [B] For if the universe is of the nature of a whole, substance is its first part [ἡ οὐσία πρῶτον μέρος]; and if it coheres by virtue of succession [καὶ εἰ τῷ ἐφεξῆς], on this view also substance is first, and is succeeded by quality [τὸ ποιόν], and then by quantity [τὸ ποσόν]. [C] At the same time these latter are not even beings [οὐδ' ὄντα] in the unqualified sense [ἁπλῶς], but are quantities [ποιότητες][20] and movements [κινήσεις] – or else even the not-white [οὐ λευκὸν] and the not-straight [τὸ οὐκ εὐθύ] would be; at least we say even these *are* [λέγομεν γοῦν εἶναι], e.g. 'there is a not-white' [ἔστιν οὐ λευκόν]. [D] Further, none of the others can exist apart [ἔτι οὐδὲν τῶν ἄλλων χωριστόν].[21]

In [A] Aristotle seems to be taking for granted the idea that the inquiry of the science of Being is marked by an examination of substance. The mention of the 'causes' and 'principles' that are supposed to be dealt with by the metaphysician seems to echo Book A, where 'the science we seek'; namely, Wisdom, is stated as the science of the ultimate principles and causes.[22] There, however, Aristotle does not sufficiently expand upon what 'the ultimate principles and causes' are about. In Book Γ it is argued that the science of Being must focus on substance without, however, a description of the type of substance that is supposed to be dealt with by the metaphysician, whereby we understand that the 'principles and causes' mentioned in Book A pertain to substances. In this passage, Aristotle seems to be combining what we have learned from Book A and Book Γ by stating that the object of inquiry should focus on the principles and causes of substances. It might be argued that the 'ultimate principles and causes' are the causes of substances. Though this is the natural outcome of what has been said in Book A and Book Γ, Aristotle does not clarify it until the above passage of Book Λ. This passage, therefore, encapsulates what has been said with respect to the science of Being in Book A and Book Γ.

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[20] It would be more accurate if 'ποιότητες' were rendered as 'qualities'. Ross's translation would be better if Aristotle had used the term 'ποσότητες'. See 1028a19, where Ross rendered the same term as 'qualities'. See, Elders (1972, pp. 76-77) for how ποιότητες in this context can denote qualities.

[21] *Met*. Λ, 1, 1069a18-24.

[22] *Met*. A, 1, 982a1-2.

[B] presents an approach to the Universe as a whole. Aristotle does not present the structure of Being in its entirety elsewhere as he does in this part of *Metaphysics*, i.e., in Book Λ. What I want to discuss now, however, is the line of thought that we encounter in [C] and [D]. These involve interconnected ideas about the primacy of substance. There is a strong parallelism between the opening lines of Book Λ and the opening lines of Book Z, where Aristotle points to the primacy of substance:

> While 'being' has all these senses, obviously that which is primarily is the 'what' [πρῶτον ὂν τὸ τί ἐστιν], which indicates [σημαίνει] the substance [τὴν οὐσίαν] of the thing. For when we say of what quality a thing is [ποῖόν τι τόδε], we say that it is good or beautiful [ἢ ἀγαθὸν λέγομεν ἢ κακόν],[23] but not that it is three cubits long or that it is a man; but when we say *what* it is, we do not say 'white' [λευκὸν] or 'hot' [θερμὸν] or 'three cubits long' [τρίπηχυ], but 'man' [ἄνθρωπον] or 'God' [θεόν]. And all other things are said to be [τὰ δ' ἄλλα λέγεται ὄντα] because they are, some of them, quantities [ποσότητες] of that which *is* in the primary sense, others qualities [ποιότητες][24] of it, others affections [πάθη] of it, and others some other determination of it [ἄλλο τι]. And so one might raise the question whether 'to walk' and 'to be healthy' and 'to sit' signify in each case something that is, and similarly in any other case of this sort; for none of them is either self-subsistent [καθ' αὐτὸ] or capable of being separated from substance [χωρίζεσθαι δυνατὸν τῆς οὐσίας], but rather, if anything, it is that which walks or seated or is healthy that is an existent thing [τῶν ὄντων].[25]

Again, in Book Γ, there is a similar line of thought:

> So, too, there are many senses in which a thing is said to be, but all refer to one starting-point [πρὸς μίαν ἀρχήν]; some things are said to be [ὄντα λέγεται] because they are substances [οὐσίαι], others because they are affections of substance [πάθη οὐσίας], others because they are process towards substance [ὁδὸς εἰς οὐσίαν], or destructions [φθοραὶ] or privations [στερήσεις] or qualities [ποιότητες] of substance, or productive [ποιητικὰ] or generative [γεννητικὰ] of substance, or of things which are relative to substance, or negations [ἀποφάσεις] of some of these things or of substance itself. It is for this reason that we say even of non-being that it *is* non-being [διὸ καὶ ὂν εἶναι μὴ ὂν φαμεν].[26]

These two passages lay emphasis on exactly the same point; namely, the primacy of substance. Aristotle refers to the secondary categories and affirms that these depend upon substance for their existence, as he maintains that only

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[23] 'ἢ ἀγαθὸν λέγομεν ἢ κακόν' is incorrectly rendered by Ross as 'we say that it is good or beautiful', translating 'κακόν' as 'beautiful' while it should be 'bad'. The translation should be as follows: 'we say that it is good or bad'.

[24] See note 20.

[25] *Met*. Z, 1, 1028a13-25.

[26] *Met*. Γ, 2, 1003b5-10.

substance is 'self subsistent' (καθ' αὐτὸ) and 'separate'; namely that substance is capable of existing without the aid of secondary categories, not vice versa. In the passage from Book Λ, Aristotle argues that we say even of non-Being that it *is* non-Being, which is exactly in line with what he argues in the above passage from Book Γ. When one imagines how substance would in fact be prior to the other categories, one must apply to Book Γ, where Aristotle articulates ontological dependence relations in CDH. Now, it would not take much imagination to see that this dependency is also reflected in the passages I have cited from Book Z and Book Λ. In those passages, then, the primacy of substance over the other so-called secondary categories is established primarily and sufficiently on ontological dependence relations between substance and the other categories.

The strong parallelism of thought in these passages shows that Book Λ is not to be separated from the basic doctrine of the science of Being encountered in the treatises of *Metaphysics*. Book Λ clearly recognizes the first level in the ontological dependence relations in the system of Being as it states most explicitly that the categories other than substance depend for their existence on the first category of substance. After all, what might be the reason for Aristotle's discussion of inter-categorical relations in Book Λ except that he makes a reference to CDH? Given that such a relation exists in Book Λ, one might find oneself strongly motivated to find the other constituents of the CDH of Being in Book Λ. After all, besides CDH, it makes no sense for Aristotle to discuss the ontological dependency of secondary categories of substance. This, I think, is naturally understood from the close textual parallelisms I have shown between the passages from Book Z, Book Γ and Book Λ, all of which discuss exactly the same point, namely the ontological priority of substance over the other categories.

5.4.2. Ontological Dependence: Intra-categorical Relations in Book Λ

We have seen that inter-categorical ontological dependence relations are recognized by Book Λ. But what can be said with respect to the intra-categorical level ontological dependencies? Can we say that such relations are also recognized by Book Λ? I think the answer is in the positive. If one is to consider the passages where Aristotle reflects on the necessity of God in the Universe, for instance, one may find some clues with respect to such relations.[27] In the sixth chapter of Book Λ, for instance, Aristotle states:

> [A] Since there were three kinds of substance [Ἐπεὶ δ' ἦσαν τρεῖς οὐσίαι], two of them natural [αἱ φυσικαὶ] and one unmovable [ἡ ἀκίνητος], regarding the latter we must assert that it is necessary that there should be an eternal unmovable substance [ἀΐδιόν τινα οὐσίαν ἀκίνητον]. [B] For substances are the first of existing things [αἵ τε γὰρ οὐσίαι πρῶται τῶν ὄντων], and if they are all destructible [εἰ πᾶσαι φθαρταί], all things are destructible [πάντα φθαρτά]. [C] But it is impossible that movement [κίνησιν] should either come into being [γενέσθαι] or cease to be [φθαρῆναι]; for it must always have existed [ἀεὶ γὰρ ἦν]. Nor can time [χρόνον] come into being or cease to be; for there could not be a before [τὸ πρότερον] and an after [ὕστερον] if time did not exist [μὴ ὄντος χρόνοὐ]. Movement [ἡ κίνησις] also is continuous [συνεχὴς], then, in the sense in which time is; for time is either the same thing [τὸ αὐτὸ] as movement or an attribute of [τι πάθος] movement.[28]

The reasoning here is tightly packed and has to be considered in context. In [A] Aristotle refers to the distinction, made in the first chapter of Book Λ, between three types of substances; namely, the non-eternal sensible substances (NSS), the eternal sensible substances (ESS) and the Immobile Substance (IS).[29] He states his aim is to show the necessity of IS. The backdrop against which Aristotle felt it necessary to give an account of such a type of substance is already established in Book Γ when his account necessitated an absolutely prior substance as the core item in the CDH of Being. In relation to that, I have mentioned that IS should be regarded as the most suitable candidate for this role. However, it should be noted that if this captures the direction of his thought in Book Γ Aristotle leaves it to his readers to supply the details. In

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[27] I will deal with the characteristics of God in close detail later in the present chapter. My sole aim in this part is to see whether intra-categorical dependency relations exist in Book Λ, whereby we have good reasons to think that CDH is recognized by Book Λ.

[28] *Met*. Λ, 6, 1071b3-11.

[29] *Met*. Λ, 1, 1069a30. Elders, however, suggests that this may not necessarily refer to the first chapter of Book Λ (1972, p. 138) on the grounds that the imperfect ἦσαν may not necessarily mark a previous discussion in the text but may signify a generally acknowledged law of Being (cf. *Theaetetus*, 156a; *De Cael*. 278b34 for usages of the imperfect tense). This does not, however, have an immediate adverse impact on what I am arguing here.

general, in any case, it does seem to fall to Aristotle's readers to reflect upon the most defensible mooring of his doctrine of the science of Being: he himself offered none. However that may be, in [A] Aristotle seems to reflect his intention to cover this gap by opening up a discussion of the necessity of IS.

In [B], Aristotle, in full confidence that he has sufficiently shown the primacy of substance over the other categories, moves swiftly to intra-categorical relations. He carries the investigation to the range of the whole Universe while he attempts to establish a hierarchy between several types of substances previously mentioned in the first chapter of Book Λ. [B] captures ontological dependence in intra-categorical relations in the fullest sense: destructible things are dependent upon things that are eternal; if the latter did not exist, all things would be destructible, in which case the Universe might come to an end.[30]

The justification for [B] is given in [C], where Aristotle turns to movement and time.[31] [1] Time is eternal, for before and after cannot be conceived without appealing to time. This amounts to saying that there is no before or after external to time. Time has never been started and will never end. If it were, it would be possible to conceive a time before time and a time after time.[32]

[2] In *Physics*, Aristotle has defined time as the number of movements according to before and after.[33] Like time, therefore, movement is also eternal since time that is already said to be eternal [1] is either identical with movement or it is a certain mode of time.

Now, time and movement have their foundations in substance, for movement is in the one that moves. Hence, since movement and time are eternal, it must be

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[30] Note that this claim is not limited to IS, rather it aims to put forward the necessity of eternal things, whether ESS or IS.
[31] The argument here, in Book Λ, seems to be the shortened version of *Phys*. VIII, 1.
[32] See also, *Phys*. VIII, 1, 251b19-26.
[33] 'For time is just this-number of motion in respect of "before" and "after" [ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ ὕστερον]' (*Phys*. IV, 11, 219b1-2). The sense in which movement is used here, is very close to 'change' (μεταβολή). Note, however, that Aristotle justifies the existence of eternal movement in a different way in *Phys*. VIII, 1, 250b23-251b13.

affirmed that there should also be an eternal substance that provides the basic foundation for this eternal motion and time.[34]

This argument, by means of which Aristotle shows the necessity of an eternal mover, sufficiently shows his interest in establishing intra-categorical dependency relations in Book Λ, which, in turn, illustrates that the intra-categorical relations in ontological dependence may be recognized by Book Λ. Recall that these relations are one of the constituent features that provide the basis for building up CDH.[35] It would not be perverse to think, therefore, that Aristotle has at least some idea, here in Book Λ, of the structure provided by CDH in Book Γ.

Although Aristotle's enterprise in Book Λ in this way shows his interest in establishing intra-categorical ontological dependence, this enterprise, as far as reflected up to now, does not show that Aristotle seeks to establish an order in the Universe by the relations found between substances. I suggest that if we can find an effort towards establishing an order by virtue of such relations, however, this will strongly motivate us to take a further step in our endeavour to find CDH in Book Λ.

Such an attempt can indeed be observed explicitly in the tenth chapter of Book Λ, where Aristotle states:

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[34] Note this argument does not show the necessity of a *single* unmoved mover. In other words, it only shows that there must be *at least* one unmoved mover. One might as well claim that this argument does not show the necessity of God as it presupposes that 'timelessness' is impossible.

[35] The fact that Aristotle establishes hierarchical structures in Book Λ does not show that ordinary *kata hen* structures are what we have in hand in this part of *Metaphysics*. I have noted in chapter II that it is also possible to build up hierarchies by means of ontological dependency relations between items (see, ch. II, section 2.2.3). Furthermore, if we were to accept that the relation between God and the other substances fits the scheme provided by *kata hen* relations, we would be able to postulate a genus to which several species are connected. The conception, however, does not allow for such a postulation for neither can God be postulated as a genus nor can the other substances be regarded as species of God. It would, therefore, be perverse to think that what Aristotle says in Book Λ and the hierarchies he establishes tacitly allow for a construction that favours ordinary *kata hen* relations. What we have are, on the contrary, hierarchies established upon ontologically dependent entities. As I have claimed, this schema is consistent with *pros hen* relations.

> And all things are ordered [συντέτακταί] together somehow, but not all alike, – both fishes and fowls and plants; and the world is not such that one thing has nothing to do with another [οὐχ οὕτως ἔχει ὥστε μὴ εἶναι θατέρῳ πρὸς θάτερον μηδέν], but they are connected [ἀλλ' ἔστι τι]. For all are ordered together to one end [πρὸς μὲν γὰρ ἓν ἅπαντα συντέτακται].[36]

It may be very interesting for the readers of Aristotle, especially to those who are so reluctant to find a connection between Book Λ and Book Γ, to see that Aristotle uses the term *pros hen* in this passage. This, however, itself is not sufficient, at least without reflection, to show that *pros hen*, i.e., CDH, is explicitly recognized by Aristotle in Book Λ. After all, one might reasonably claim that the use of *pros hen* in this passage does not necessarily refer to the technical usage of the term encountered in Book Γ. Based on such an objection, one might prefer to affirm that the usage we encounter here in Book Λ is the result of a mere accident and this usage by no means shows that Book Λ recognizes CDH of Book Γ.

The passage involves a strong sense of unity and ordering in the Universe, which depends on some connection to one thing, as far as this thing is the common end of all things in the Universe. Things in the Universe, in other words, *connected towards one*, i.e. towards the end. Hence, in terms of what this passage suggests, the ordering of the Universe depends on its having a common final cause. The 'towards one' relation in this passage, therefore, is eminently teleological.

We, however, already know that *pros hen* is used in other places of the Aristotelian corpus, for instance, in Book Γ, which is not so obviously teleological. But, in all of its usages, the *pros hen* is employed by Aristotle for exactly the same reason, that is, to establish a kind of unity through the ordering of several instances. Such stress on the order of the Universe by virtue of its having a determined end can be observed in other places of Book Λ as well. For instance, in the first chapter of Book Λ Aristotle states:

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[36] *Met.* Λ, 10, 1075a16-19.

> For if the universe is of the nature of a whole [εἰ ὡς ὅλον τι τὸ πᾶν], substance is its first part [ἡ οὐσία πρῶτον μέρος]; and if it coheres by virtue of succession [τῷ ἐφεξῆς], on this view also substance is first, and is succeeded by quality [τὸ ποιόν], and then by quantity [τὸ ποσόν].[37]

Note that instead of 'κόσμος', Aristotle uses the term 'τὸ πᾶν' to designate the Universe in this passage. The reason for this might be to emphasize the high degree of unity, order and completeness that the Universe enjoys.[38] If the Universe is a 'whole' (ὅλον), then, as he argues in *Physics*, what Aristotle has in mind here is the completeness of the Universe through its end:

> Whole [ὅλον] and complete [τέλειον] are either quite identical or closely akin. Nothing is complete [τέλειον] which has no end [τέλος] and the end [τέλος] is limit [πέρας].[39]

The question, therefore, underlying Aristotle's use of *pros hen* is always the question that asks whether it is possible to arrive at unification through some order, such as causal connectedness, ontological dependence and logical dependence. Aristotle's answer is that these things that are to be unified are not all the same, in which case we would have a *kata hen* relation, but they are all 'towards one', that is, they depend on one single thing, whereby they can indeed be unified despite their multiplicity. Hence, whether we understand *pros hen* as merely teleological or some other way, it is clear that the term always serves for a certain unity despite multiplicity.

Qua its aim, therefore, the term *pros hen* that we encounter in the passage of Book Λ is very similar to that we encounter in Book Γ although the two usages have different degrees of clarity. In Book Γ, we have seen that the causal connectedness – and, for that matter, the teleological connectedness – constitutes merely one aspect of the *pros hen* relation. Whereas in Book Λ we find the term serving for an order by means of merely teleological causal relation, in Book Γ, along with the teleological causal connectedness, we have seen that the usage is loaded with further connections better articulated than those we find in Book Λ. In other words, the two usages are perfectly in line

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[37] *Met*. Λ, 1, 1069a19-21.
[38] Cf. *Timaeaus*, 30b-c; 37d
[39] *Phys*. III, 6, 207a13-15; cf. *Philebus*, 30b.

with each other in their construction, although the appearance of *pros hen* in Book Γ clearly is a more developed version of this relation compared with Book Λ. But this does not necessarily rule out the suggestion that Book Λ involves a version of *pros hen*. There may be several reasons for this unarticulated outlook of *pros hen* in Book Λ, such as the book being written in an early stage of Aristotle's philosophical development. However that may be, the usages have exactly the same aim, namely to establish a certain unity through ordering. In this way, despite the fact that this usage is not as articulated as we encounter in Book Γ, we can to some degree claim that the usage of the term in Book Λ is also technical and not merely accidental.

5.5. God and the Science of Being

I have argued that Book Λ is to be considered as filling an important gap in the doctrine of the science of Being. It does this by picturing the characteristics of God, without which, as I have claimed, the CDH of Being cannot operate so as to pave the way for a unified universal science of Being. In order to support my view, I will now turn to investigate the characteristics that are attributed to God in Book Λ. Throughout this section what I will attempt to show is that God is given the very characteristics He would need to be given if He were to be the core of CDH of Being. In other words, Aristotle's enterprise in Book Λ with respect to the characteristics of God is exactly the enterprise he needs if he is to have an operating CDH of Being. This will not only show that Book Γ and Book Λ belong to the same philosophical enterprise, but also that the discussion in Book Λ with respect to the attributes of God proceeds against the backdrop established in Book Γ, without which his enterprise in Book Λ would be unmotivated and otiose.

5.5.1. Ontological Dependence and the Conception of God in Book Λ

If one is to investigate the discussion of the characteristics of God in Book Λ against the doctrine that we encounter in Book Γ, namely the CDH of Being,

one notices that Aristotle's way of characterizing God provides exactly what is necessary in order to fulfil the requirements of ontological dependence in CDH. It is possible to observe the traces of this if one is appeal to Aristotle's conception of the Universe as outlined in Book Λ. This conception is established upon an insight that things in the Universe have a certain taxonomical structure, that is, they are 'ordered' (τάξις)[40] and that this order can be observed at every level of the structure of the Universe. A certain order is envisaged in the structure of organisms[41] and in all the natural phenomena encountered in the world, for example, in the succession of the seasons,[42] in drying and moistening of some parts of earth,[43] in precipitation and the formation of clouds[44] and so on. This leads Aristotle even to identify what is 'natural' with what is 'ordered'.[45] This taxonomical structure can best be reflected in the Universe, which is strictly ordered in its entirety.[46]

Aristotle outlines how he envisages the order in the Universe in this passage from Book Λ:

> We must consider also in which of two ways the nature of the universe [ἡ τοῦ ὅλου φύσις] contains the good [τὸ ἀγαθὸν] or the highest good [τὸ ἄριστον], whether as something separate [κεχωρισμένον τι] and by itself [καθ' αὐτό], or as the order of the parts [τὴν τάξιν]. Probably in both ways, as an army [στράτευμα] does. For the good is found both in the order [ἐν τῇ τάξει] and in the leader [ὁ στρατηγός], and more in the latter; for he does not depend on the order [τὴν τάξιν] but it depends on him. And all things are ordered together somehow [πάντα δὲ συντέτακταί πως], but not all alike [ἀλλ' οὐχ ὁμοίως], – both fishes and fowls and plants; and the world is not such that

[40] In general terms, the word τάξις might be used in two contexts in Aristotle. It can be used in a political context in correlation with constitution and law (see, for instance, *Pol*. III, 6, 1278b9; II, 5, 1263a23; 6, 1264b31; 8, 1268a15; 9, 1269a32; 10, 1272a4; IV, 1, 1289a15; 3, 1290a8; V, 7, 1307b18) or else it can refer to the natural order and structure of the Universe and earthly phenomena as will be shown below.
[41] Cf. *GA* IV, 8, 776b5.
[42] *Meteor*. I, 9, 347a5.
[43] *Meteor*. I, 14, 351a25.
[44] *Meteor*. II, 3, 358a25.
[45] 'And since what is according to nature [κατὰ φύσιν] is always in due order [ἔχει τάξιν]…' *GA* III, 10, 760a31; 'But that which holds by nature and is natural can never be anything disorderly; for nature is everywhere the cause of order [ἡ γὰρ φύσις αἰτία πᾶσιν τάξεως]' (*Phys*. VIII, 1, 252a11-12). Cf. *Cael*. III, 2, 301a5.
[46] Cf. *Cael*. III, 2, 300b20 ff. This order is eternal: 'But the order of the universe is eternal [ἡ δέ γε τοῦ κόσμου τάξις ἀΐδιος]' (*Cael*. II, 14, 296a33-34).

> one thing has nothing to do with another, but they are connected. For all are ordered together to one end [πρὸς μὲν γὰρ ἓν ἅπαντα συντέτακται].[47]

Although Aristotle's intention in this passage is to investigate whether the good or the highest good is to be regarded as implicit in the parts of the Universe or should be postulated as a separate principle, one might yet proceed along these lines so as to gain some definite clues about how the structure of the Universe that stands at the back of Aristotle's mind might look. Aristotle envisages the Universe as extremely taxonomical, similar to that of an army that is ordered according to everything which it is directed towards; namely, the ultimate terminus – the God –, analogous to a commander (ὁ στρατηγός) in an army, who is still ultimately responsible for its order.[48] Plants, animals and other substances have different rankings and are all connected to each other in a successive order (ἐφεξῆς),[49] according to the composition of their material and formal nature. In this structure, whereas the higher substances are the principles of lower substances, these latter, in turn, stand as the substrata of higher substances. Every substantial form, in this structure, finds its condition of realization in a material/potential nature[50] just as a man finds his possibility to exist in a mature body. As one climbs through the successive levels of the Universe, by virtue of gradual exclusion of matter and contingency, one reaches the terminus of all things; this level marks off the point according to which everything is organized.

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[47] *Met*. Λ, 9, 1075a11-19.

[48] A similar claim, which places God as the ultimate reason for the order of the Universe, can be found in Plato in *Timaeus* 30a.

[49] Aristotle explains the term 'ἐφεξῆς' in the fifth book of *Physics* thus: 'A thing is in succession [ἐφεξῆς] when it is after the beginning in position or in form or in some other respect in which it is definitely so regarded, and when further there is nothing of the *same* kind as itself between it [μηδὲν μεταξύ ἐστι τῶν ἐν ταὐτῷ γένει] and that to which it is in succession, e.g. a line or lines if it is a line, a unit or units if it is a unit, a house if it is a house (there is nothing to prevent something of a *different* kind being between). For that which is in succession is in succession to a particular thing, and is something posterior [τὸ γὰρ ἐφεξῆς τινὶ ἐφεξῆς καὶ ὕστερόν τι]…' *Phys*. V, 3, 226b34-227a4 (see *Met*. K, 12, 1068b31 for a similar exposition of ἐφεξῆς). Correspondingly, the conception of the Universe that Aristotle has in mind in Book Λ (see *Met*. Λ, 1, 1069a19-21) is established upon priority relations, in which some substances stand 'in succession' to each other. God, who is ultimately prior to all the other substances, marks off the summit of the chains of succession in the Universe. (Succession does not necessitate continuity (συνεχής), *Phys*. VIII, 6, 259a15ff.); the continuous regular motion of the first heaven cannot thereby be justified by merely successive structure of the Universe. For the latter point, see *Phys*. V, 4, 288a20ff. Cf. *GC* II, 10, 337a16ff.)

[50] Cf. *GA* II, 5, 740b28ff.; 741b14; *Met*. Λ, 1, 1069b16.

God, who has no need for a material substratum for His existence, defines the summit of the hierarchy that is constructed between two poles of existence; namely, matter and pure form. This strictly taxonomical structure might reasonably prompt one to attribute several characteristics to the ultimate end of the hierarchy of substances; namely, God. Since God stands at the top of the hierarchies of substances, and guarantees and maintains the eternal order of the Universe, it is reasonable to say that God has no contingency, thereby no matter and is simple in His nature. This amounts to saying that God may reasonably be thought to be necessary (ἀνάγκη), simple (ἡ ἁπλῆ) and purely actual (ἐνέργεια). What Aristotle explicitly attributes to God in the seventh chapter of Book Λ is in line with this backdrop: 'Substance is first, and in substance, that which is simple and exists actually'.[51] These attributes can be seen as the natural outcome of a strictly organized Universe in which substances are ranked according to the composition of their natures in a hierarchical way, analogous to an army.

Now, one might reasonably be tempted to ask what is the connection between God's attributes in Aristotle's taxonomical conception of the Universe. One might wonder also how these attributes together could show the ontological priority of God.

Aristotle presents some arguments in Book Λ that God's nature is pure actuality.[52] He appeals to eternal motion to justify his position on the nature of God, according to which God cannot merely be something *capable of* causing the motion, but must actively do so.[53] If, according to Aristotle's point of view, this were not the case – that is, if God were not to be pure actuality – then that would conflict with Aristotle's dictum that there must be an eternal motion in the Universe.

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[51] 'καὶ ταύτης ἡ οὐσία πρώτη, καὶ ταύτης ἡ ἁπλῆ καὶ κατ' ἐνέργειαν' *Met.* Λ, 7, 1072a31-32. See, also, 1072b10, where Aristotle says: 'The first mover, then, of necessity [ἐξ ἀνάγκης] exists'.
[52] *Met.* Λ, 7, 1071b12-21; 1073a4-13.
[53] *Met.* Λ, 7, 1071b17.

Furthermore, to originate an eternal motion requires infinite power.[54] God, however, who is responsible for the eternal motion in the Universe, has no magnitude;[55] for infinite power cannot dwell in a finite magnitude.[56] For this reason, also, God is pure actuality.[57]

Now while discussing the priority of imperishable things over perishable things in Book ϑ, Aristotle himself states that what is of necessity, namely the second of the attributes of God that I have enumerated hitherto, must always be actual as he gives the answer to our initial question that asked whether there is any connection between the attributes of God and His being ontologically independent: 'Nor can anything which is of necessity [ἐξ ἀνάγκης] be potential; yet these things are primary [καίτοι ταῦτα πρῶτα]; for if these did not exist, nothing would exist [εἰ γὰρ ταῦτα μὴ ἦν, οὐθὲν ἂν ἦν]'.[58] Hence, the attributes of God being pure actuality and necessary are closely linked to each other and together they imply that He should be regarded as ontologically prior. Hence, if anything is to exist, it is necessary that we should postulate something actual beforehand[59] and the existence of the Universe is guaranteed by what is always

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[54] *Met*. Λ, 7, 1073a7-8.

[55] *Met*. Λ, 7, 1073a10.

[56] *Met*. Λ, 7, 1073a10-11. This claim reasonably assumes that there cannot be infinite magnitude: See, *Met*. Λ, 7, 1073a5-11.

[57] The activity of God should not be confused with the activity of mobility. Although Aristotle, in several places, identifies activity with motion (see, *De An*. II, 5, 417a16; *Met*. ϑ, 3, 1047a30-32; *Rhet*. III, 11, 1412a9; cf. *EN* IX, 7, 1168a6), an activity that is still correlated to motion is imperfect (*Phys*. III, 2, 201b31; *De An*. III, 7, 431a6; *Met*. K, 9, 1066a20). On the other hand, the activity of God is an *activity of immobility* (ἐνέργεια ἀκινησίας, *EN* VIII, 14, 1154b26), which is perfect and marked by contemplation (*EN* X, 8, 1178b23) and happiness (*EN* VIII, 14, 1154b27: for passages where Aristotle links activity (ἐνέργεια) with happiness (εὐδαιμονία), see, *EN* IX, 9, 1169b29; X, 6, 1177a5; *MM* II, 10, 1208a36; *Pol*. VII, 8, 1328a39; 13, 1332a9). Therefore, actuality can rightly be regarded as the most desirable end, i.e. τέλος (*Met*. ϑ, 8, 1050a9; 1050a22; Λ, 7, 1072b16; *EN* VII, 12, 1153a10; X, 4, 1174b23-1175a17; cf. *MM* II, 12, 1211b27).

[58] *Met*. ϑ, 8, 1050b18-19. This is echoed in *De Interpretatione* as well where Aristotle links necessity with actuality: 'It is evident from what has been said that what is of necessity [τὸ ἐξ ἀνάγκης ὂν] is in actuality [κατ' ἐνέργειάν ἐστιν]; so that, if the things which are eternal [τὰ ἀίδια] are prior [πρότερα], then also actuality is prior to capability [ἐνέργεια δυνάμεως προτέρα]' (13, 23a21-23: for the priority of actuality over potentiality see *Met*. ϑ, 7-8 and my discussion in ch. 4). Cf. *Met*. ϑ, 8, 1050b17ff. Aristotle attempts to show that imperishable things exist actually; he concludes by stating that: 'for if these did not exist, nothing would exist [εἰ γὰρ ταῦτα μὴ ἦν, οὐθὲν ἂν ἦν]' (1050b9).

[59] Along with the passages cited in the previous note see, also, *De Caelo* where Aristotle states: 'That which is potentially [ἐκ δυνάμει] a certain kind of body [τινὸς ὄντος σώματος] may, it is

in actuality; namely, the God. The fact that God is pure actuality shows that He does not have contingent parts, which in turn makes Him entirely necessary and makes Him ontologically prior to everything else that involve potentiality in their natures.[60] This conception meets exactly the requirements of ontological dependence in the CDH of Being. Being pure actuality, God can ultimately be regarded as prior to every other substance in the Universe. This strongly motivates us to affirm that the study of God can be applied to other levels of Being through the CDH of Being by virtue of the dependency relations explained hitherto in Book Γ.

The characteristics of God, His being pure actuality and necessity, are closely linked to another of God's characteristics that I have previously mentioned. In Book Λ Aristotle claims that God is simple (ἁπλοῦς).[61] The primary sense of necessary, according to Aristotle's declarations in Book Δ, overlaps with what is simple:

> Now some things owe their necessity [ἀναγκαῖα] to something other than themselves [ἕτερον]; others do not, while they are the source of necessity in other things. Therefore the necessary [ἀναγκαῖον] in the primary [τὸ πρῶτον] and strict sense [κυρίως] is the simple [τὸ ἁπλοῦν]; for this does not admit of [ἐνδέχεται] more states than one, so that it does not admit even of one state and another; for it would thereby admit of more than one. If, then, there are certain eternal [ἀΐδια] and unmovable things [ἀκίνητα], nothing compulsory [βίαιον] or against their nature [παρὰ φύσιν] attaches them.[62]

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true, become such in actuality [ἐνεργείᾳ γένοιτ' ἂν σῶμα]. But if the potential body was not already in actuality some other kind of body, the existence of separate void [κενὸν ἔσται κεχωρισμένον] must be admitted' (III, 2, 302a5), which, according to Aristotle, is impossible. For a similar line of thought, see *GA* II, 6, 743a23.

[60] Cf. *Met*. Λ, 6, 1071b23ff. See also, *On the Universe*: 'I think also that God and nothing else is meant when we speak of necessity…' (7, 401b8-9). What is of necessity, according to Aristotle, should be eternal (ἀΐδιος) (see *GC* II, 11, 338a1-2; cf. *Met*. Δ, 5, 1015b14).

[61] 'Substance is first, and in substance, that which is simple and exists actually [καὶ ταύτης ἡ οὐσία πρώτη, καὶ ταύτης ἡ ἁπλῆ καὶ κατ' ἐνέργειαν]' *(Met*. Λ, 7, 1072a31-32). Plato expresses a similar line of thought in the *Republic*: 'A god [ὁ θεὸς], then, is simple [ἁπλοῦν] and true [ἀληθὲς] in word and deed [ἔν τε ἔργῳ καὶ λόγῳ]' (II, 382e8-9; cf. II, 380d).

[62] *Met*. Δ, 5, 1015b9-15. This is confirmed by Aristotle's statement in Λ 7: 'For the necessary has all these senses that which is necessary perforce [βίᾳ] because it is contrary to impulse [παρὰ τὴν ὁρμήν], that without which the good is impossible, and that which cannot be otherwise but is *absolutely* [ἁπλῶς] necessary' (*Met*. Λ, 7, 1072b11-13).

Elsewhere Aristotle claims that being *simpliciter* applies only to substance.[63] Substance, according to Aristotle, can be matter, the composition of matter and form or pure form. Not all of these types of substance can be simple. In several places of the corpus, Aristotle speaks of the nature of substances as being marked by pure matter; namely, fire, air, water and earth, as *simple* elements.[64] Not only these substances are simple, however. God, whose nature is pure actuality and therefore pure form,[65] is also simple. The latter, however, should be understood as genuinely simple because Aristotle claims that what is simple in the strict sense is prior to what is complex,[66] for which reason God should be regarded as prior to the aforementioned material elements. God can unequivocally be observed to be the ultimate principle of the Universe.[67] Hence, that which is simple in the strict sense can rightly be regarded as that which is necessary in the strict sense[68] and this attaches to God more than any other substance in the Universe. God cannot be other than what He is, that is, He cannot undergo any change for He has no potentiality, for which reason, again, He is who He is[69] and strictly simple and necessary.

It can be concluded that God's being pure actuality and His being necessary are closely interconnected and together they show that God is simple. The fact that God is simple, that He has no material and potential nature, also shows that Aristotle is correct when he claims that God is separate (χωριστός). Since God is not in need of any material substratum for His existence, we need not be

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[63] *Met*. Z, 1, 1028a30-31.

[64] *Phys*. II, 1, 192b10; *Cael*. I, 2, 268b28; III, 1, 298a29; 8, 306b3; *De An*. III, 1, 424b30; *Met*. Λ, 8, 988b30; Δ, 8, 1017b10; H, 1, 1042a8; K, 10, 1067a1; cf. *Phys*. III, 5, 204b33; *GC* I, 1, 314a28.

[65] 'Further, matter [ἡ ὕλη] exists in a potential [δυνάμει] state, just because it may attain to its form; and when it exists *actually* [ἐνεργείᾳ], then it is in its form [ἐν τῷ εἴδει]' (*Met*. ϑ, 8, 1050a15-16). See also *Met*. H, 1, 1042b9; Λ, 5, 1071a8.

[66] *Cael*. II, 4, 286b17.

[67] 'The first mover, then, of necessity exists; and in so far as it is necessary, it is good [καλῶς], and in this sense a first principle [ἀρχή]' (*Met*. Λ, 7, 1072b10-11). See *Met*. K, 1, 1059b35, where Aristotle states '…the simpler is more of a principle than the less simple…'. Because God is simply good, He is ultimately desirable: *EN*, VIII, 2, 1155b24; 5, 1157b27.

[68] Along with the passage I have cited, Aristotle links that which is necessary to simple in several places of his corpus. See, for example, *An. Pr*. I, 24, 41b30; *An. Post.* I, 2, 71b9; *Phys*. II, 5, 197a31; *Met*. Δ, 9, 1018a2; E, 2, 1027a5 (cf. *Met*. K, 5, 1062a2).

[69] 'But since there is something which moves while itself unmoved [κινοῦν αὐτὸ ἀκίνητον ὄν], existing actually [ἐνεργείᾳ ὄν], this can in no way be otherwise than as it is [τοῦτο οὐκ ἐνδέχεται ἄλλως ἔχειν οὐδαμῶς]' *Met*. Λ, 7, 1072b7-8.

surprised by Aristotle's explicit statement in the seventh chapter of Book Λ, where he firmly claims that God is separate: 'It is clear then from what has been said that there is substance which is eternal [ἀΐδιος] and unmovable [ἀκίνητος] and separate [κεχωρισμένη] from sensible things [τῶν αἰσθητῶν].'[70] The fact that God is separate shows not only that the conception of God is reconcilable with what Aristotle says in Book E but also that God is to be regarded as ontologically independent, and that is exactly what Aristotle needs in order to place God at the core of the CDH of Being, whereby a unified universal science of Being can be achieved. I have discussed the former point in close detail in Book E,[71] where I have claimed that that which is absolutely separate should be regarded as ontologically independent in the absolute sense and that this should be marked by the highest instance of Being only. Hence, as one might plainly observe, the conception of God in Book Λ squares well with this conception that stands out in Book E and, together with this harmony, one might plainly observe that the characteristics of God detailed in Book Λ are exactly the properties Aristotle needs to have attributed to God, thereby one can place God at the core of the CDH of Being. For the requirements of ontological dependence, as I observed in Book Γ, must be fulfilled if one is to establish the CDH of Being upon which the science of Being is established.[72]

The upshot of this discussion is that the basic three interconnected characteristics of God detailed in Book Λ are exactly the characteristics that Aristotle needed if He were to place God at the core of the CDH of Being. If what I have suggested in Book Γ in terms of the CDH of Being is right, then the characteristics of God that we encounter in Book Λ are just pictured in the way

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[70] *Met*. Λ, 7, 1073a3-5.

[71] See my discussion on χωριστός in ch. III, 3.3.1.

[72] It has been declared in Book Λ that God is not only χωριστός but also ἀκίνητος (immovable, see *Met*. Λ, 7, 1072a21-26; a more elaborated version of Aristotle's justification of the immobility of God can be found in *Physics* VIII; see, also *GC* I, 7, 324a33-34; *GA* IV, 3, 768b19-21, where the first principle is said to be immovable. Unlike Aristotle, Plato thought that the first principle can be nothing except 'the change effected by self-generated motion [ἡ τῆς αὐτῆς αὐτὴν κινησάσης μεταβολή]' (*Laws*, X, 895a2-3)). The characteristic of immovability, as I have argued in chapter III, is another requirement implied by Aristotle's discussion of the subject matter of the science of Being in Book E (see my discussion in ch. III, 3.3.2.). On these grounds, then, one might hesitate to attend to the idea that Book Λ was written before Book E (as, for instance, suggested by Frede (2000, p. 50)).

that God can fulfil the requirement of ontological dependence. We should, however, expect to observe similar results with respect to other requirements of the CDH of Being as well, namely, logical dependence and causal connectedness, if we are to bring the claim fully to a close. I will now turn my attention to these latter requirements and investigate whether the conception of God in Book Λ is consistent with these requirements.

5.5.2. Logical Dependence and Priority in Knowledge

It is also possible to affirm that the description of God we encounter in Book Λ gives exactly the properties Aristotle needs God to have in order that God fulfils the requirements of logical dependence and priority in knowledge, whereby He can be placed at the core of the CDH of Being.

When I discussed the central books in chapter IV of this thesis, I implied that the problems with respect to the essences of things emerge from Aristotle's hylomorphic analysis of sensible substances.[73] In other words, the intelligibility of a sensible substance is undermined by the constituent matter implanted in its nature. Matter has nothing in itself to provide the determination and intelligibility of the sensible thing in question.[74] Matter in sensible things is absolutely undetermined (ἀόριστα) and unknowable (ἄγνωστος).[75] Since all sensible things contain matter in their nature,[76] when one attempts to define them this would inevitably involve matter in the expression of the definition of the thing in question.[77] However, the problems with respect to the intelligibility of a thing are averted from the perspective of form, which, as we have been told in the central books, is perfectly determinate and intelligible. The definition,

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[73] See ch. IV, section 5.1. for details of this claim.
[74] *Phys*. III, 6, 207a25; *Met*. Z, 10, 1036a8-9.
[75] 'But matter is unknowable [ἄγνωστος] in itself [καθ' αὑτήν]' (*Met*. Z, 10, 1036a8-9). Matter in this respect resembles accidentals; neither are definite, i.e. determined: 'And it is only right that the "of" something locution [τὸ ἐκείνινον λέγεσθαι] should be used with reference both to the matter and to the accidents [κατὰ τὴν ὕλην καὶ τὰ πάθη]; for both are indeterminates [ἀόριστα]' (*Met*. ϑ, 7, 1049a36-1049b2).
[76] *Met*. Z, 8, 1033b17-19; cf. *Phys*. I, 7, 190b22-23.
[77] *Met*. Z, 7, 1033a1-5; 8, 1033b24-26.

according to this approach, must express the form rather than the matter.[78] The essence, therefore, should be identified with form, which Aristotle frequently does,[79] since the definition, if it is to be genuine, should be of form; only in this way will it reflect the unchangeable, consistent and eternal nature of the thing in question. We have also seen that sensibles, because they involve matter in their nature, are not intelligible *in the absolute sense*.[80] The contingent nature of matter undermines our construction of proper definitions of sensible individuals. All scientific knowledge, on the other hand, depends on necessary and universal truths.[81] These are alien to the nature of matter, which is regarded as contingent.[82]

Thus, if we could postulate a substance with a nature that consists of pure form, the problems raised in the central books with respect to the intelligibility of substance would disappear. There would be no matter involved in the nature of such a substance that can undermine any attempt to construct a definition, which would reasonably reflect all that *is* and all that can be expressed concerning that substance simultaneously since there would be no difference between the Being and the essence of such a substance.[83] This substance would be eternal and unchanging; what this substance would be, therefore, overlaps with all that it is *per se*. Hence, it would be perfectly possible to construct a genuine definition of such a substance.

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[78] For the passages where τὸ τί ἦν εἶναι, i.e. the essence, refers to form (εἶδος), see *Phys*. II, 2, 194a21; *Cael*. I, 9, 278a3; *GC* II, 9, 335b35; *De An*. II, 1, 412a20; *Met*. Z, 4, 1029b27; 7, 1032b2 ff.; 10, 1035b16 ff.; H, 3, 1043b1; Λ, 8, 1074a35. This is supported in passages where Aristotle discusses four causes as well; in these passages τὸ τί ἦν εἶναι is always correlated with the formal cause: *Met*. A, 3, 983a27; 7, 988a34; Δ, 2, 1013a27; b22; Z, 17, 1041a28; H, 4, 1044b1.

[79] See *Met*. Z, 7, 1032b1-2; 1032b13-14; 10, 1035b14-16; 1035b32; 11, 1037a28-b4; H, 1044a36.

[80] See last section of ch. IV.

[81] *Met*. K, 8, 1064b30; *NE* VI, 3, 1139b23; 6, 1140b32; *EE* II, 6, 1223a1. The reason for this is that scientific knowledge proceeds through demonstrations and demonstrations can only be established by what is necessary: see, *An. Pr*. I, 8; 12-14; 27; *An. Post*. I, 6, 74b5; 75a13; *Rhet*. I, 2, 1357a29; 22, 1396a2-3.

[82] See *An. Post*. I, 8, where Aristotle claims that there can be no demonstration of perishable things because of their contingent nature.

[83] 'Clearly, then, each primary [τῶν πρώτων] and self-subsistent [καθ' αὐτὰ] thing is one and the same as its essence' *(Met*. Z, 6, 1032a4).

Approaching Book Λ with this in mind would demonstrate that Aristotle's determination of God, as pure actuality, is naturally understood as the continuation of the evidence we have in the central books with respect to absolute intelligibility.[84] Having no unintelligible matter in His nature, God can rightly be regarded as the most intelligible thing in the Universe. The problems that emerge from the hylomorphic analysis of sensible substances are removed when it comes to God, for He has no material nature. Thus, with what I have said with respect to essence and Being in the central books, and with respect to the nature of God in Book Λ, it is reasonable to affirm that God is fully definable and thereby absolutely intelligible. This amounts to saying that God indeed merits being regarded as prior in knowledge and for this reason, also, He is logically prior in the absolute sense.

From all these we may infer that, according to what Aristotle has claimed throughout his *Metaphysics*, a first and necessary substance must exist that secures the certitude of human knowledge. Such a substance is logically independent, in the absolute sense, based upon the fact that this substance does not undergo any change.[85] Nowhere in *Metaphysics* can we find any evidence that God is above human reason; on the contrary, it seems that Aristotle holds just the opposite view – that God is the source of all certitude of man's knowledge. He is eminently knowable because He is necessary, pure actuality and simple. The problems with respect to sensible substances (whether they be NSS or ESS) are not applicable in the case of the Supreme Being, whose simple, necessary and eternal nature guarantees the certitude of knowledge of the Universe.

These remarks show that the conception of God in Book Λ is described so as to pave the way for God to be logically prior in the absolute sense. Hence, when

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[84] This was already envisaged in the central books: 'But in the case of so-called self-subsistent things [τῶν καθ' αὑτὰ λεγομένω], is a thing necessarily the same as its essence [ἆρ' ἀνάγκη ταὐτὸ εἶναι]?' (*Met.* Z, 6, 1031a28-29).

[85] This substance is what makes the principle of non-contradiction evident, without which we would be left with only the material world, which in turn, however, would not be sufficient to make the principle of non-contradiction evident (see *Met.* Γ, 5).

read against the backdrop of Book Γ, it seems not to be a mere accident that Aristotle gives to God the attribute of being the absolute intelligible thing in the Universe. On the contrary, the close harmony between the doctrines of the two treatises seems to suggest that they are parts of the same enterprise with respect to the science of Being. While Book Γ provides the background against which the science of Being can simultaneously be a science that is universal and unified, Book Λ, in turn, provides the most basic constituent element of the structure of Being, namely the core item, God, described in such a way that He can fulfil the dependency relations needed for the CDH of Being to operate adequately.

This claim, however, further requires that we detect similar results for the final feature of the CDH of Being stated in Book Γ, namely, the causal connectedness. I will now inquire into this feature and see if this also is in line with what I claim in this part of my thesis.

5.5.3. Causal Connectedness

If I am right then, along with the qualities that satisfy ontological dependence and logical dependence, God should be given the very characteristics that He needs to have to be capable of fulfilling the requirements of causal connectedness as well. Recall that, according to causal connectedness, the peripheral elements in the CDH of Being are supposed to be connected to the core item in at least one of the four standard modes of causation. What can be said, then, with respect to Aristotle's description of God and the requirement of causal connectedness?

In Book Λ Aristotle envisages God as a principle (ἀρχή) on whom 'depend [ἤρτηται] the heavens [ὁ οὐρανὸς] and the world of nature [ἡ φύσις]'.[86] Aristotle, accordingly, envisages God as the ultimate *telos* of the Universe, the ultimate aim to which everything strives and for the sake of which everything

[86] *Met*. Λ, 7, 1072b14.

moves. In this way, God can rightly be regarded as the final principle to which everything else in the Universe is connected.[87] The teleological conception of the Universe,[88] according to which everything seeks what is best and excellent,[89] is consistent with God's being the ultimate aim, which rules not by issuing commands but by His being an end for everything in the Universe.[90] The immanent nature of things,[91] striving for what is 'good'[92] and 'complete',[93] allow such an end to operate in the Universe in the way it does. God, in this way, can rightly be regarded as the ultimate final cause of everything in the Universe.[94]

Furthermore, according to Book Λ, beyond standing as a final cause, God is additionally seen as an efficient cause:

> Therefore the first heavens [ὁ πρῶτος οὐρανός] must be eternal [ἀΐδιος]. There is therefore also something which moves [κινεῖ] them. And since that which is moved [τὸ κινούμενον] and moves [κινοῦν] is intermediate [μέσον], there is a mover which moves without being moved [ὃ οὐ κινούμενον κινεῖ], being eternal [ἀΐδιον], substance [οὐσία], and actuality [ἐνέργεια]. And the

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[87] 'Further, the *final cause* [τὸ οὗ ἕνεκα] is an end [τέλος], and that sort of end which is not for the sake of something else, but for whose sake everything else is' (*Met*. α, 2, 994b9-10); 'But the object aimed at [οὗ ἕνεκα] as end [τέλος] is best [ἄριστον], and the cause [αἴτιον] of all that comes under it, and first of all goods [πρῶτον πάντων]' (*EE*, II, 8, 1218b9-11). For the passages, where *telos*, the end, is regarded as a principle, see *Phys*. II, 3, 194b32; 9, 200a22; *GA*, IV, 3, 767b14; *Met*. Δ, 2, 1013a33; *Pol*. I, 1, 1252b34 (cf. *GA* II, 6, 742a28).

[88] For the teleological conception of the Universe, see, for instance: *Phys*. II, 8, 199a8; *De An*. III, 9, 432b21; *GA* I, 1, 715b15-16; V, 1, 778b10; *Met*. Λ, 10, 1075a15; *Pol*. I, 2, 1252b34.

[89] The *telos*, therefore, marks what is best; see, for instance: *Top*. VI, 8, 146b10; *OS* 2, 455b24; *Met*. Δ, 2, 1013b26; *NE* VI, 12, 1144a32; *EE* II, 8, 1218b10; II, 1, 1219a10; *Pol*. I, 1, 1252b34.

[90] *EE* VII, 14, 1249b14.

[91] For *telos* may even be regarded as the ultimate nature of things: 'But the nature [ἡ δὲ φύσις] is the end [τέλος] or that for the sake of which [οὗ ἕνεκα]' (*Phys*. II, 2, 194a28-29); 'the nature of a thing is its end [ἡ δὲ φύσις τέλος ἐστίν]' (*Pol*. I, 2, 1252b32). See, also, *MM* II, 12, 1211b27-33, where *telos* is identified with actuality (ἐνέργεια).

[92] *Telos* can rightly be regarded as the good (ἀγαθός) (see, *NE* I, 1, 1094a3; *EE* II, 8, 1218b10; *Rhet*. I, 7, 1363b16), which can ultimately be identified by God (cf. *Met*. Λ, 10).

[93] 'Things which have attained a good end [τέλος] are called complete [τέλεια]; for things are complete in virtue of having attained their end' (*Met*. Δ, 16, 1021b23-25); 'Nothing is complete [τέλειον] which has no end [τέλος]' (*Phys*. III, 6, 207a14).

[94] Certainly, though, from what has been said in this section, it should not be understood that God is the proximate cause of every particular instance of Being. Beings have their own proximate causes, however, it can still be legitimately and generically affirmed that God is *also* their principle when one speaks in analogical terms. Aristotle elucidates the point in Λ, 5.

> object of desire [τὸ ὀρεκτὸν] and the object of thought [τὸ νοητόν] move in this way; they move without being moved [κινεῖ οὐ κινούμενα].[95]

According to Aristotle's conception in this passage, the Prime Mover, which does not itself move, is responsible for the movement of the eternal circular motion of the outer sphere of the fixed stars. Since the motions of the inner spheres are conditioned to the motion of the outer sphere, the Prime Mover is also responsible for the motion of the planets and the Sun, which in turn is responsible for the transformation of the seasons causing generation and corruption of things on Earth. The movement originated from the Prime Mover thereby propagates through the Universe by intermediate spheres. One may reasonably think, therefore, that movement originated by the Prime Mover thereby ultimately conditions the changes and generation of entities on Earth. The Prime Mover, namely God, may well be regarded in this way as the ultimate efficient cause in the Universe.[96]

But how, in reality, does the Prime Mover originate the supposed perfect circular motion in the outer sphere and the motion in the Universe? It is important to note that the doctrine of the generation of movement in the Universe depends on Aristotle's technical use of the term 'desire' (ὄρεξις). We may articulate two ways in which Aristotle understands 'desire': first, the desire can be rational, in which case it is called 'βούλησις', second, it can be

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[95] *Met*. Λ, 7, 1072a23-27. See also *Phys*. VIII; *Meteor*. I, 2, 339a24; *MA* 6, 701a1; *Met*. Λ, 10, where Aristotle envisages God as efficient cause.

[96] It has long been a puzzle to scholars whether Aristotle is espousing a single unmoved mover or a plurality of deities in Book Λ. In more anachronistic terms, whether he is a polytheist or a monotheist (for several views on this subject see, for instance, Guthrie (1934), pp. 90-97; Elders (1972), pp. 57-68, Lang (1993), Frede (2000)). In chapters six, seven and nine of Book Λ, Aristotle seems to be espousing a single immaterial Being. In the eighth chapter, however, he affirms that there are as many movers as there are revolving celestial bodies. This issue does not require immediate attention for the purposes of my investigation. In terms of what I have been arguing there should be an Unmoved Mover, namely, God, who is envisaged as meeting the requirements of the CDH of Being revealed in Book Γ. The text of Book Λ does not allow for an unequivocal interpretation in this matter; namely, that there is *at least* one Unmoved Mover, identified by God, who has such and such attributes that meet the requirements of the CDH of Being as I have explained hitherto. In terms of the other question, whether Aristotle is espousing a view that allows for more than one unmoved mover, I will note that such an approach should not be accepted without scrutiny. The texts yield such an unsatisfactory and complex picture that the resulting portrait seems to be extremely ambiguous and complex, which raises further questions that are extremely difficult to answer with the evidence in hand.

non-rational desire, namely, 'ἐπιθυμία'.[97] It is the first kind of desire that is in question in Book Λ as it has its origins in thought, since the object of thought, according to Aristotle's view of his endeavour to explain the movement in the Universe, is what motivates one to move by virtue of being an attractive goal to be admired.[98] Envisaging what is desirable as an efficient cause may seem to be a little hard to fathom at first, particularly for modern readers, who expect a direct perceptional effect in which some pulling or pushing is involved in order to make an object move.[99] However, Aristotle's meaning may look fairly clear if one takes into account what Aristotle claims throughout his corpus together with his affirmation with respect to God as pure actuality and form concerning desire and movement. Correspondingly, in several different places Aristotle argues that 'desire' is the origin of movement.[100] That which is desired, according to Aristotle, is good[101] and God, as we have already seen is the ultimate good in the Universe. The first motion in the outer sphere is originated by God's being the object of thought,[102] and together with the motion that is originated in living Beings that strive for what is absolutely good, i.e. God, as their ultimate end, who stands as an object of desire, one can picture the direction Aristotle's argument that envisages God as the efficient cause seems to take. God, in this way, functions as an efficient cause; He is the cause of the movement in the Universe and so of movement in us.[103] I will close this discussion by noting that in view of the doctrine of desire, upon which the claim concerning God's being the efficient cause of the Universe stands, the

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[97] For the distinction see *De An*. II, 3, 414b1ff.; III, 10, 433a23ff.; *MA* 6, 700b19-22; *EE* VII, 14, 1247b18; *Rhet*. I, 10, 1369a1.

[98] Apart from Book Λ, 9, where Aristotle discusses the divine thought, see also *MA* 6, 700b21ff. For some recent discussions on the divine thought and how it originates movement in Aristotle, see Norman (1969); Menn (1992); Lang (1993), pp. 270-275; Caston (1999); Frede (2000), pp. 42-45; Bradshaw (2001) and Burnyeat (2008).

[99] For the operation of efficient cause by way of a direct contact, see *Phys*. III, 2, 202a3ff. This will not, however, do in the case of God for certain reasons that are cited in Book Λ, 7, 1072b1ff. For originating a movement by way of indirect means see: *GC* II, 6, 323a25; *De An*. II, 4, 415b2; 20.

[100] See: *De An*. III, 10, 433a23-25; *MA* 6, 700b19-22; 7, 701a35; *MM* 12, 1187b37 (cf. *NE* VI, 2, 1139b2).

[101] *NE* I, 2, 1094a18ff.; VI, 2, 1139b4; VIII, 8, 1159b20; *Rhet*. I, 10, 1369a2.

[102] One might be tempted to ask why the outer sphere makes a perfect circular motion instead of thinking and staying at rest. Aristotle does not give a plain answer to this question although it may be possible to find a suggested solution in the special kind of matter that the outer sphere has.

[103] Cf. *De An*. II, 4, 415a26-b7.

force that God imposes on us and on the Universe functions upon wise desires rather than despotic enforcements: 'for god is not an imperative [ἐπιτακτικῶς] ruler, but is an end [οὗ ἕνεκα] with a view to which wisdom [ἡ φρόνησις] issues its commands'.[104]

Finally, at this point it might be tempting to question how, in reality, Aristotle might succeed with his argument in considering God as the efficient, the final and the formal cause simultaneously. Does Aristotle give any hints whereby the claim that reduces three causes into one might be sufficiently justified? After all, if this captures the line of thought that Aristotle is espousing in Book Λ, there must be evidence elsewhere in the corpus that can establish the grounds for his claims.

Hopefully, evidence can be found that Aristotle thinks the three principles can be reduced to one. For instance, in *Physics*, Aristotle states that the three causes can be identical:

> Now, the causes [αἱ αἰτίαι] being four, it is the business of the student of nature [τοῦ φυσικοῦ] to know [εἰδέναι] about them all, and if he refers his problems back to all of them, he will assign the 'why' [τὸ διὰ τί] in the way proper to his science – the matter [τὴν ὕλην], the form [τὸ εἶδος], the mover [τὸ κινῆσαν], that for the sake of which [τὸ οὗ ἕνεκα]. The last three often coincide [ἔρχεται δὲ τὰ τρία εἰς [τὸ] ἓν πολλάκις]; for the what [τί ἐστι] and that for the sake of which [τὸ οὗ ἕνεκα] are one [ἕν ἐστι], while the primary source of motion [ἡ κίνησις πρῶτον] is the same [ταὐτὸ] in species as these.[105]

Though a justification for the proposal that three causes often coincide is missing, this passage is encouraging, for it reflects at least an inclination towards an approach that yields the identification of the formal, final and efficient causes. To be conclusive, any remark on this point requires far more than that which is found in this passage.

It might be more straightforward to show one part of the claim that it is possible to identify the formal and the final cause. A passage from *Physics* may of help in understanding this point:

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[104] *EE* VII, 15, 1249b13-14.
[105] *Phys*. II, 7, 198a22-26.

> If then it is both by nature [φύσει] and for an end [ἕνεκά] that the swallow makes its nest and the spider its web, and plants grow leaves for the sake of [ἕνεκα] the fruit and send their roots down (not up) for the sake of nourishment, it is plain that this kind of cause [ἡ αἰτία] is operative in things which come to be and are by nature. And since nature is twofold [ἐπεὶ ἡ φύσις διττή], the matter [ὕλη] and the form [μορφή], of which the latter is the end [τέλος], and since all the rest is for the sake of the end [τοῦ τέλους δὲ ἕνεκα τἆλλα], the form must be the cause in the sense of that for the sake of which [αὕτη ἂν εἴη ἡ αἰτία, ἡ οὗ ἕνεκα].[106]

In this passage Aristotle neatly encapsulates the idea that because nature always inclines towards the attainment of some form, which can be marked by *telos*, the final cause and the formal cause may well be identified with each other. The form, which is immanent to natural things, operates just as the final cause. Leaves grow *for the sake of* the production of the fruit, which amounts to saying that the *aim* in growing leaves is to produce the fruit. Obviously, fruit do not operate on a plant as an external cause, on the contrary, the growing of the leaves and the becoming of the fruit occurs *by virtue of* the immanent nature, the organization and the structure of the plant itself, which is conceived as an immanent form, which, in turn, enables the plant to produce the fruit. Again, plants send their roots down *for the sake of* some end; namely, nourishment. The growing of the roots downwards is not generated by an external cause, but by the help of the immanent form of the plant. Hence, the final cause is reduced to formal cause. The nature of things involves form and matter and the former operates as an immanent final cause. The teleological conception of the Universe, together with the hylomorphic analysis, therefore, allow for the identification of the formal and the final cause. According to this line of thought, things in the Universe strive for some end so as to attain the form which is immanent to their nature and is functioning, as it were, as the final cause in the processes of actualization.[107]

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[106] *Phys.* II, 8, 199a26-32.

[107] See, also, *Generation of Animals* (I, 1, 175a5), where after enumerating the four causes Aristotle states: 'We have already discussed the other three causes, for the definition and the final cause are the same'. Similarly in *Metaphysics*, Book H (4, 1044a32) Aristotle states: 'When one inquires what is the cause [τὸ αἴτιον], one should, as causes are spoken of in several senses [ἐπεὶ πλεοναχῶς τὰ αἴτια λέγεται], state all the possible causes. E.g. what is the material cause [ὕλη] of man? The menstrual fluid. What is the moving cause [κινοῦν]? The *semen*. The formal cause [τὸ εἶδος]? His essence [τὸ τί ἦν εἶναι]. The final cause [οὗ ἕνεκα]? His end [τὸ τέλος]. But perhaps the latter two are the same [ἴσως δὲ ταῦτα ἅμφω τὸ αὐτό].' Concerning the explicit

It is also possible to find passages that show what Aristotle thinks about identifying the efficient and the formal cause. A passage from Book Z may be of help in showing that this is just about where Aristotle seems to be treading:

> … health is the formula [λόγος] and the knowledge [ἐπιστήμη] in the soul [ἐν τῇ ψυχῇ]. The healthy subject, then, is produced as the result of the following train of thought; since *this* is health [τοδὶ ὑγίεια], if the subject is to be healthy *this* must first be present, e.g. a uniform state of body, and if this is to be present, there must be heat; and the physician goes on thinking [ἀεὶ νοεῖ] thus until he brings the matter to a final step which he himself can take. Then from this point onward, i.e. the process towards health, is called a 'making' [ποίησις]. Therefore it follows that in a sense health comes from health [τὴν ὑγίειαν ἐξ ὑγιείας γίγνεσθαι] and house from house [τὴν οἰκίαν ἐξ οἰκίας], that with matter from that without matter [τῆς ἄνευ ὕλης τὴν ἔχουσαν ὕλην]; for the medical art and the building art are the form [τὸ εἶδος] of health and of the house; and I call the essence [τὸ τί ἦν εἶναι] substance without matter [ἄνευ ὕλης]. Of productions [γενέσεων] and movements [κινήσεων] one part is called thinking [ἡ μὲν νόησις] and the other making [ἡ δὲ ποίησις], – that which proceeds from the starting-point and the form is thinking, and that which proceeds from the final step of the thinking is making. And each of the intermediate steps is taken in the same way.[108]

The making of the artificial products, as explained in this passage, may be of some help in showing how the efficient cause might be reduced to the formal cause in reality. Aristotle differentiates two stages in the productions and movements; he denominates the first stage as 'thinking' and the second as 'making'. 'Thinking' comes out of form and is associated with it, while 'making', which is the second stage of the productions and movements, comes out of 'thinking'.[109] The former step cannot be taken without the latter one, which may well amount to saying that 'making' is entirely dependent on 'thinking'. The efficient cause, which is necessarily linked to 'making', is connected asymmetrically to the actual principle; the form. The origin of movements and the whole process of production depend ultimately on the formal principle. Hence, the form functions as if it were a primary principle, which covers efficient cause in its definitive scope. The actual cause, which lies

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identification of formal and final principles one might also see: *Phys.* II, 7, 198b4; II, 9, 200a14; *GC*, I, 7, 324b18; II, 9, 335b6; *Meteor*. IV, 2, 379b25; *GA* I, 1, 715a5; *Met*. Δ, 4, 1015a11 (cf. *Econ.* I, 1, 1343a13).

[108] *Met*. Z, 7, 1032b5-18.

[109] See *De An*. III, 10, 433a16: 'and that which is last in the process of thinking is the beginning of the action.'

behind physicians' healing, is the form of health in the physician's soul. The form of health, which initiates the production of health, is the real reason upon which all the processes of the production of health depend. The actual role of the physician is to transfer this form to a patient. The art of healing in the physician's soul, which is the formal cause of the process of healing, taken strictly, functions as the efficient cause simply because it not only starts the movement of production of health but also *governs* it through the process of healing. In short, healing can be regarded as a process in which health is transferred to a patient by virtue of the knowledge of the medical art in the physician's soul. Hence, the art of healing can be regarded as both the formal cause and the efficient cause in the strict sense. It is on the basis of this approach that Aristotle declares, 'in a sense health comes from health'.

Similarly, in the art of building, an architect transfers the form of the house from his soul to some receptive matter. The process of building originates from and is carried by the form – and for that matter, the *telos* – in the architect's soul. The architect first conceives the house and then applies this concept to a receptive matter. Both of the stages, 'thinking' and 'making', are determined and *governed* through the form, that is, the art of building. The form of the actual house is nothing more than the initial form in the architect's soul. Hence, in a sense, it can rightly be affirmed that house comes from house and health from health. As a result, efficient cause is reduced to the formal cause.[110]

It seems, upon reflection, that Aristotle's own corpus allows for a possible identification of the formal, final and efficient causes and this is exactly what happens in the case of God. Aristotle conceives God as a pure actuality, who moves by being an object of desire and thus as an end. To put the matter, admittedly prejudicially, in other terms, by virtue of being the final cause and *telos* of the Universe, and by His admirable nature, who convenes every possible good in His nature and to whom the natures of things in the Universe

[110] For other texts where the efficient causality of the formal cause is justified, see: *Phys*. II, 3, 195a6-8; III, 2, 202a9; *GC* I, 5, 320b18-22; 7, 324a30-b6; *De An*. III, 5, 430a12; *Met*. Δ, 2, 1013b6-9; Z, 9, 1034a23-24; Θ, 2, 1046b15-24; Λ, 4, 1070b29; 6, 1071b30.

are, as it were, intimately connected,[111] God governs the Universe and thereby functions as an efficient cause.

The result of my investigation with respect to causal connectedness, then, is that it can be affirmed that Aristotle's description of God in Book Λ takes such an approach that the conception of God can fulfil the requirements of the CDH of Being, upon which the science of Being is established in Book Γ. Aristotle envisages God as a principle to which the things in the Universe are ultimately, and for that matter analogically, connected. That is obviously enough the point that Aristotle is driving home. Having approached the question in this way, I find no impediment to thinking that what Aristotle says with respect to God in Book Λ in terms of the requirement of causal connectedness is so pictured that the science of Being Aristotle envisages in Book Γ can be established through CDH.

5.6. Conclusion

We have seen that the description of God in Book Λ fits exactly the requirements of the CDH of Being upon which the science of Being is established. In Book Λ God is attributed the very properties He needs to be the core of the CDH of Being. God, in Book Λ is described as fulfilling the requirements of ontological dependence, logical dependence and causal connectedness. The close harmony between the texts of Book Γ and Book Λ shows that they can indeed be regarded as parts of the same doctrine that comes from the whole corpus of treatises of *Metaphysics*. These two works complement each other; while Book Γ provides the basic structure, Book Λ completes the doctrine by introducing the most important constituent of the system in just the way it is required by the CDH encountered in Book Γ. In such a structure, if we did not have Book Γ, Aristotle's enterprise into the characteristics of God would seem sketchy and unmotivated. If, on the other

[111] God being the final cause of things in the Universe should be thought of, as it were, as an analogical cause. The proximate causes, on the other hand, differ from one thing to another. See *Met*. Λ, 5.

hand, we did not have Book Λ, then the science of Being could not operate as one might expect for, in such a case, the most important element of the CDH of Being, that is the highest instance of Being, namely God, would be missing in the system. Having filled such an important gap in the doctrine of the science of Being, I find it implausible that Book Λ is to be regarded as an appendix or a treatise on its own.

Now we know that all the other substances in the Universe are necessarily linked to God, by way of whom they find their basis of existence whilst they become intelligible. This amounts to saying that all the other substances are both ontologically and logically dependent upon God, the study of whom thereby might propagate through the whole Being by virtue of the necessary dependency relations according to the structure supplied in Book Γ. Furthermore, Aristotle envisages God as the ultimate efficient, final and formal principle of the Universe, whereby we attain the basic explanatory pattern that needs to be established for the operation of the science of Being. In such a structure, because of the very characteristics He has, only God merits to be the core item of the CDH of Being.

The underlying framework offered in Book Γ paves the way for a unified universal science of Being through God. God stands at the nexus of all the possible manifestations of Being, the study of whom would lead to a universal knowledge of Being, that is, a study of Being in the unqualified way or Being qua Being. I find this proposal overwhelmingly plausible, especially in the face of the evidence that can be found not only in Book Γ and Book Λ but also in the whole Aristotelian corpus, not only because any successful development in this direction would provide the most complete and forceful picture of the science of Being so far attempted, while distancing us from the unsatisfactorily complex picture of developmentalist doctrines about the unity of the conception of the science of Being, but also make the text of *Metaphysics* highly readable. Hence, given the evidence that can be found in the two major treatises of *Metaphysics*, together with the whole Aristotelian corpus, it would be perverse, if

understandable, to say that Aristotle's conception of the science of Being in Book Γ widely contradicts that of Book Λ, and it would be similarly perverse, and hardly understandable, to say that the reason for this distinctness must rest on the basis that Aristotle espoused different views at different stages of his philosophical development. Hence, I think much can be said in favour of the proposal, some appearances to the contrary notwithstanding, as for instance, stated by Frede and others, that Aristotle's doctrine of the science of Being in Book Γ and with what he says with respect to God, in Book Λ are complementary parts of the same doctrine, though at times extremely ambiguous and highly speculative, merits serious consideration in the face of far more speculative doctrines of chronology of the text of *Metaphysics*.

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